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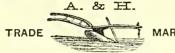
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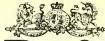
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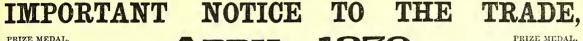
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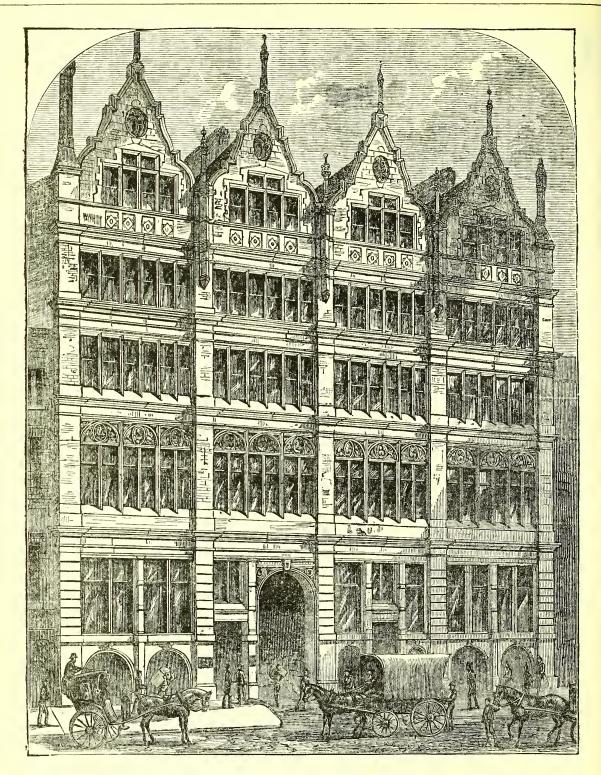
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THE LAST TRADES MARKS' ACT.

TRADE MARKS' REGISTRY OFFICE: London, 4th May, 1878.

FRANCIS JONATHAN CLARKE, Esq.

SIR,—I have to inform you that, pursuant to Rule 21 under the Trades Marks' Registration Act, 1875, the Trade Marks applied for by you in application No. {3,270 and }, and duly advertised in No. 20 of the Trade Marks' Journal, have been registered in your name in class 3.—I am, sir, your obedient servant, H. HEADER LACK, Registrar.

Mem.-3,275 is the number of Mr. F. J. Clarke's Trade Mark, "BLOOD MIXTURE."

IN CHANCERY.

Between FRANCIS J. CLARKE, Plaintiff,

LORD CHANCELLOR. VICE CHANCELLOR MALINS.

GEORGE CLARKE, Defendant.

1873. C. No. 109. CAUTION.

WHEREAS, the Vice-Chancellor, Sir Richard Malins, on the 21st day of July, 1873, upon the application of Francis J. Clarke, of High Street, in the City of Lincoln, Chemist, the plaintiff in the above suit, awarded a perpetual Injunction, restraining the defendant, George Clarke, of Manchester, his servants and agents, from using the words "Blood Purifying Mixture," or any other imitation or colourable imitation of the Plaintiff's Trade Mark, "BLOOD MIXTURE," in or upon any bottles offered for sale by or for the defendant, or on any labels, handbills, or advertisements printed, used, or issued by or for the defendant, and from in any other way representing any medicine, compounded by or for him, to be "Blood Mixture," and from doing any act or thing to induce the belief that medicine compounded by or for the defendant, is "Blood Mixture," or a medicine compounded by the plaintiff.

And it was Ordered, that the defendant, at the request of the plaintiff, and in the presence of some person to be

And it was Ordered, that the decendant, at the request of the plaintift, and in the presence of some person to be appointed by him for that purpose, destroy all wrappers, handbills, bottles, advertisements, and circulars in the defendant's possession, or under his control, containing the plaintiff's said trade mark, or any colourable imitation thereof.

ALL PERSONS ARE THEREFORE CAUTIONED against purchasing, selling, exposing for sale, or otherwise dealing in any medicine purporting to be "Blood Mixture," not compounded by the plaintiff, Francis J. Clarke, in bottles or wrappers, or with other accompaniments bearing facsimiles or fraudulent or colourable imitations of those invented and used by the plaintiff, the said Francis J. Clarke. Retail dealers, as well as manufacturers, are equally liable.

Dated this 28th day of July, 1873.

H. K. HEBB, Plaintiff's Solicitor, Lincoln.

CAUTION.-PUBLIC APOLOGY.

CHARLES MONTAGUE CLARKE, do hereby acknowledge that I, under the SPURIOUS title of Doctor of Medicine, have illegally infringed and pirated your Trade Mark, "BLOOD MIXTURE," and copied your advertisements, labels, handbills, and "Caution," with intent to deceive the public.

and "Caution," with intent to deceive the public.

And I, GEORGE HERBERT CLARKE, of 130 Shoreditch, London, do hereby acknowledge that I, under the title of Pharmaceutical Chemist, have prepared and sold for the said Charles Montague Clarke a certain compound called Blood Renovator. Now we, the said Charles Montague Clarke and George Herbert Clarke, do hereby, in consideration of your consenting to offer no evidence against the said George Herbert Clarke on a TRUE BILL FOUND AGAINST HIM, under the Merchandise Marks Act, by the Grand Jury of the Middlesex Sessions, on the 6th day of October instant, undertake and agree to discontinue such practices, and to hand over to your Solicitor forthwith all wrappers, handbills, advertisements, circulars, and bottles containing the stuff, in our power or control, relating to the said spurious compound called "Blood Renovator," and we humbly apologise for having resorted to such practices,

CHARLES MONTAGUE CLARKE.

GEORGE HERBERT CLARKE GEORGE HERBERT CLARKE.

SIGNED by the said Charles Montague Clarke and George Herbert Clarke, on the 13th of October, 1874, in the presence of HENRY BULL, Clerk to Mr. J. Seymour Salaman, 12 King Street, Cheapside, Solicitor to the Trade Mark Protection Society. To Mr. F. J. Clarke, Lincoln, Proprietor of Clarke's World-Famed Blood Mixture.

CAUTION.—Mr. CLARKE will take immediate proceedings against all persons pirating his Trade Mark—"BLOOD MIXTURE" (fully protected under the Trade Marks' Registration Act of 1875), Labels, Wrappers, Bills, or Advertisements, or in any way infringing his rights.

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THE CONDY'S FLUID CASE.

FINAL DEFEAT of MR. H. BOLLMANN CONDY. FAILURE AND EXPOSURE OF THE "TRAP TO CATCH CHEMISTS."

CONDY ". MITCHELL. COURT OF APPEAL, LINCOLN'S INN, Nov. 27, 1877.

LORD JUSTICE JAMES (without needing to hear defendant's counsel) said—That such a suit should have been instituted at all was very remarkable; but that, after the learned Vice-Chancellor's indegment, this appeal should have been brought on was particularly strange. Dr. Mitchell had obtained his right by payment of a substantial money consideration, and Convy's Fully AND CONDY'S OZONISED WATER WERE AS MUCH HIS PROPERTY AS THE PLAINTIEF'S. Having that right, Dr. Mitchell was entitled to set up the Condy's Fluid Company.

LORD JUSTICE BAGGALLAY was of the same opinion. The style of the partnership had been "Bollmann Condy & Co.," and the dlaintiff set up in his own name of "H. Bollmann Condy." It was not necessary to consider whether he might have been restrained from so doing; but he came into court with a very bad grace. To get evidence HE HAD RESORTED TO WHAT WAS, IN FACT, A TRAP TO CATCH CHEMISTS.

LORD JUSTICE THESIGER was also of that opinion; and especially as to the character of the plaintiff's evidence. A good deal of it seemed to him not admissible at all.

LORD JUSTICE JAMES: APPEAL DISMISSED WITH COSTS.

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ELECTION

OF

PHARMAGEUTICAL COUNCIL.

PHARMACEUTICAL COUNCIL.

To the Editor of THE CHEMIST AND DRUGGIST.

Sir,—Though I approve of new Candidates for the Council, as it is at present elected, expressing their views on Pharmaceutical matters in printed addresses, I do not deem it needful for existing Membors to do so. Their views in this matter should be so well known to the members of the Pharmaceutical Society as to render their publication anew unnecessary.

This has hitherto been the rule with myself, and I only deviate from it on this occasion for one purpose, namely, to express regret at my inability to induce my fellow councillors to move for such an alteration in our bye laws as would admit of the Council being elected by districts over the coun'ry, instead of imperially, as at present.

Were this done, there would be a possibility of the electors having such a personal knowledge of the various Candidates as would form a satisfactory substitute for election addresses.

I am, &c.,

DANIEL FRAZER.

ELECTION OF COUNC) OR 1879.

To the Members and Associates in Business of the Pharmaceutical Society of Great Britain.

Gentlemen,—Having again been nominated for Election as a Member of your Council, I return my best thanks to those gentlemen who supported me on the last occasion, and again solicit their votes and influence.

I am conversant with the requirements of the Trade in general, having had upwards of thirty-one years' experience both in town and country businesses, and have been a member of your Society for nearly twenty-two years.

I do not pledge myself to adopt any particular course of action, but if elected shall endeavour to support and promote those measures which I consider will prove most conducive to the interests of the whole body, both in a material and social point of view.

The detailed work of the Council is necessarily transacted by its several Committees, and obviously members of the Council residing at a distance from London are unable to attend such Committees frequently, as a reference to the "Attendance of Members of Council" will show.

Being a resident in London, I should, if elected, be prepared to give the necessary time to Committees, as well as to the Council meetings.

Again soliciting your votes and influence, I remain, Gentlemen, Your obedient servant,

EDWARD NORTHWAY BUTT (Jolley & Co.),

13 Curzon Street, Mayfair, W.

N.B.—Attention is directed to Section 21 of the Act of 1868, as follows:—"Alt voting papers being transmitted under cover to the Secretary not less than one clear day (i.e. by Monday evening) prior to the day on which the election is to take place." Many votes are disallowed every year from arriving too late.

ELECTION OF COUNCIL

PHARMACEUTICAL SOCIETY.

BROTHER CHEMISTS & ELECTORS,

In allowing myself to be nominated for the Council I have been actuated by a desire to see the Trade interest as well represented as the Educational and the Benevolent.

Former Councils have been chiefly composed of gentlemen who were either Wholesale Druggists or Chemists owning superior dispensing establishments at the West-end of London or fashionable inland towns and watering places; hitherto the rank and file forming the bulk of trade have been all but unrepresented.

I may claim for myself the merit of having at the various annual meetings drawn the attention of the Council to the unfairness of unqualified Store-owners being allowed to violate the Pharmacy Act and compete unlawfully with the examined Chemist.

The necessity for a more popular Council to co-operate with such clear-sighted, able gentlemen as Messrs. Chu: thill, Greenish, Hampson, and others was well exen plified in the Shepperley case, for, had it not been for the untiring exertions of the Birmingham Trade Association, the niggardly policy of the Pharmaceutical Council would have forfeited our law-protected Counterprescribing, without which it would be impossible to conduct an ordinary retail trade.

Individually, I am desirous to have this new Council draft a Bill for application to the High Court of Parliament, giving power to restrain Grocers, Drapers, Oilmen, and other unqualified persons from trading as they now do, in eleven-twelfths of the drugs, medicines, and nostrums that are consumed, to the exclusion of the highly-trained and educated Pharmaceutical Chemist. The fairness of this is obvious, when we consider that our own sons are not legally qualified until such time as we have spent at least one hundred pounds in training them for their important responsibilities.

If elected I pledge myself to attend all the Council meetings and use my tongue and unit of interest at the Board in defending all Trade interests and privileges, whether they are jeopardized by Parliamentary legislation, professional defence associations, or the apathetic indifference of the Council itself.

In conclusion I solicit as a favour that you will record your votes in the interest of myself and other liberal gentlemen, who have the time and ability to represent, and when requisite the courage to defend, your rights and privileges to the uttermost.

To act as the Delegate of the Trade is the ambition of

Yours faithfully,

ROBERT OWEN FITCH,

200 Well Street, South Hackney, E.

Middlesex.

N.B.—Since publishing, the Lord Chief Justice has proncunced judgment on Store Dispensing in strict accordance with the terms I explained before the Council at the Annual Meetings, May 1877 and 1878.

TO THE ELECTORS OF THE PHARMACEUTICAL SOCIETY.

GENTLEMEN.

At the earnest solicitation of a large number of my pharmaceutical friends, I have again allowed myself to be nominated for one of the vacant seats in the Council at the ensuing election.

I cannot but think that the present representation upon the Council is totally inadequate to the country members, that they are not fully and fairly represented, and one of the objects of my candidature is that this anomaly may be rectified.

No one can be more jealous than myself of the just privileges of the chemists of this country, so long and so advantageously administered for the benefit of the public as well as the trade, and if elected I would endeavour to urge the consideration of measures of sound and practical utility, for the consolidation in a legal manner of the ancient rights and immunities of the trade.

I feel very strongly that more stringent measures should be taken by the Executive for repressing the sale of poisons by unqualified persons, and would also watch most closely the acts of the many cooperative trading societies daily multiplying over the country; and if our present powers are not sufficient to cope with this growing injustice, I would support a carefully-digested measure of pharmaceutical reform, which to my mind should be prepared and introduced at as early a period as possible.

In conclusion, I may perhaps be permitted to add, that if you do me the honour of electing me, I have both the leisure and the inclination to scrve you, and will pledge myself to attend, not only the Council meetings of the Society, but also those committees upon which I may be placed.

Earnestly soliciting your support, I am, Gentlemen, very faithfully yours,

J. G. F. RICHARDSON,

Pharmaceutical Chemist.

Houghton House, Stoneygate, and 10 Friar Lane, Leicester. April 22, 1879.

CHEMISTS AND DRUGGISTS' TRADE ASSOCIATION GREAT

NOTICE OF ANNUAL GENERAL MEETING.

NOTICE IS HEREBY GIVEN that the THIRD ANNUAL GENERAL MEETING of the Members of this Association will be held in the Brown of the Research of this Association will be held in the Banqueting-room of the INNS OF COURT HOTEL, Lincoln's Inn Fields, London-W.C., on Tuesday, May 20, 1879, at Twelve noon, for Half-past Twelve, for the transaction of the following business:-

To receive and consider the Report of the Executive Committee, and the General Statements of the Funds of the Association.

To discuss questions affecting the interests of the trade.

Office of the Association, 23 Burlington Chambers, New Street, Birmingham, May 5th, 1879.

W. F. HAYDON, Secretary.

LONDON COMMITTEE.

The Partners in the Firm of Allen & Hanburys.
Frederick Andrews, 34 Leinster Terrace, Hyde Park, W.
Edwin Applegate, 5 Hercules Terrace, Holloway Road, N.
The Partners in the Firm of Baiss Brothers & Co.
The Partners in the Firm of Barron, Harveys & Simpson.
The Partners in the Firm of Burgoyne, Burbidges, Cyriax & Farries.
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Thomas Greenish, 20 New Street, Dorset Square, N.W.
Robert Hampson, 205 St. John Street Road, E.C.
The Partners in the Firm of Hearon, Squire & Francis.
The Partners in the Firm of Herrings & Co.
The Partners in the Firm of A. S. Hill & Son.
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The Partners in the Firm of Hodgkinsons, Stead & Treacher. The Partners in the Firm of Allen & Hanburys. The Partners in the Firm of Hodgkinsons, Frestons & King.
The Partners in the Firm of Hodgkinsons, Stead & Treacher.
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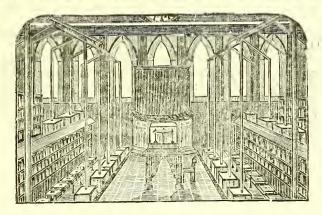
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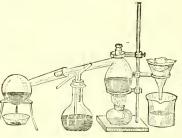
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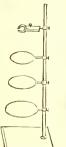


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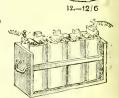
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&c., for about £90. Re-beautified and ready to open. Fixtures for a Shop 18 by 14, nearly new, £40, cut to fit.

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BUSINESS WANTED.

GOOD FAMILY AND DISPENSING BUSINESS WANTED; if part remain preferred. Address, S. F., care of Messrs. Hearon, Squire & Francis, 5 Coleman Street, E.C.

WANTED, to Purchase a genuine Chemist and Druggist's Business, in a small market town, returning from £500 to £800. Address, stating particulars, to A. B. C., Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street.

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A GOOD MIXED TRADE; First-class fixtures; populous neighbourhood, within 15 minutes' walk of Manchester Exchange; returns over £1,000. Apply to C. Blakeway, 96 Deansgate, Manchester.

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NEAR LONDON, Light Retail, neatly fitted and well stocked; in present hands several years; price £360. S. F., care of Messrs, Hearou & Co., 5 Coleman Street, London, E.C.

A FIRST-CLASS DISPENSING AND RETAIL BUSINESS in a pleasant suburb of Liverpool, large handsome fitted shop; returns £700. Address, Wimpenny, Waterloo, near Liverpool.

 $\ensuremath{BERKS.--Very}$ old-established Dispensing and Agricultural Business; returns last year about \$500; want \$400, or a valuation. A. B. C., Barclay & Sons, 95 Farringdon Street, London.

A SELECT Retail and Dispensing Business, in a very populous subarh; rent £23; plate-glass windows, and very nicely fitted throughout; a splendid opportunity for a small capitalist. Apply, in the first instance, by letter, to A. B. C., eare of Mr. Rogers, 12 Paternoster Row, E.C.

CHEMISTS.—For Sale a light Retail, Dispensing, and Prescribing Business in a market town in Northumberland; incoming easy; rent under £20; returns about £509; nearly half profit. Apply to Charles S. Romanes, C.A., 4 George Street, Edinburgh.

I EICESTER.—Chemists' Business for Disposal, established 12 years; returns over £400, and might be doubled; sole eause of leaving—illness; lowest price as it stands, £270. Apply, B., Messrs. Richardson & Co., Friar Land, Leicester.

POR IMMEDIATE DISPOSAL in one of the principal thoroughfares in Birmingham; a good Retail Mixed Business, taking about £6 weekly; eapable of much extension; a bargain at £180. Address, E. W. D., Mr. Trott, Cigar Merchant, New Street, Birmingham.

CHESHIRE.—In a very pretty and favourite locality, a select Family and Dispensing Business; large house and beautiful garden attached; good opportunity for one accustomed to high-class Pharmacy. Address, A. M., Office of The Chemist and Druggist, 44A Cannon Street, Loudon.

TO CHEMISTS.—For Sale a Business in a southern suburb of London, I with Stationery and Post and Money Order Offices attached, near two railway stations; plate-glass front; returns about £250; price, £300. "Physic," Sanger & Sous, 252 Oxford Street, London, W.

POR DISPOSAL.—A Genuine Old-established Chemist's Business, in a large village, about 56 miles from London; no opposition; returns, £570; rent, £30. Address, M. E. L., Messrs. Maw, Son & Thompson, 7 to 12 Aldersgate Street, London, E.C.

FOR DISPOSAL, at the end of June next, a well established Business, in an important agricultural town; eapable of considerable extension. For particulars apply to G. W., Messrs. Barron, Squire & Co., Bush Lane, London.

IMMEDIATE DISPOSAL.—Genuine Dispensing, Prescribing, and Light Retail; principally cash; owner going into the country; same hands 18 years. Particulars apply to X., 81 Maldeu Road, Haverstock Hill, N.W. To a beginner this is an opportunity not to be missed.

CHEMISTS; a successful and increasing light Retail; returns £500 per annum; in a busy main thoroughfare; good house, lease, &c.; price £300; stock at valuation, or for everything £350; those without this amount need not trouble. Cards of Mr. Bushnell, Corn Merchant, 181 King's Cross Road, King's Cross.

FOR IMMEDIATE DISPOSAL, in eonsequence of the death of the proprietor, a very profitable Business; in same hands nearly 40 years; handsome double plate-glass front, with side entrance; well fitted and stocked; main thoroughfare; £350. C. B. Warrington, 59 Artillery Place, Woolwich.

TASTERN COUNTIES.—Immediate Disposal, an old-established Mixed Business, in one of the principal thoroughfares of a large market town; plate-glass windows; good house and garden; returns £1,255; rent £50; taxes, £5; satisfactory reasons for disposing. Apply to S. J., Messrs. Barron, Harvey & Simpson, Giltspur Street, London.

I MMEDIATELY.—An old-established Busiuess in the principal thoroughfare of an improving and flourishing market town in the West of England; plate-glass windows; long lease; good house and garden; most satisfactory reasons for disposal; an excellent opportunity for a beginner. Apply to "Chemist," 2 Charlton Villas, Ashley Hill, Bristol.

FOR DISPOSAL.—The Oldest Established Business in a fashionable watering-place in South Wales; returns about £800; could be considerably increased; proprietor retriring on account of ill-health; knowledge of Welsh desirable; rent, £60. Established 1831. For particulars, apply by letter to S. B. D., 4 Whitmore Place, Old Trafford, Manchester.

FOR DISPOSAL, in a thickly-populated and improving neighbourhood, a Genuine Retail and Prescribing Business; returns about £200 per annum, which might be considerably increased; price for goodwill, stock, and fixtures, £120; rent, £14 los., clear; satisfactory reasons for disposal. Apply, S. Davison, Carlton, near Nottingham.

POR DISPOSAL, immediately, a good Dispensing and Family Business in a respectable neighbourhood, returning over £900 per year; will bear strict investigation; satisfactory reasons for Disposal; will be sold at a moderate price for cash. Address, Y. Z., Messrs. Raimes & Co., 58 Hanover Street, Liverpool.

FOR DISPOSAL, in the centre of a large colliery district in Derbyshire, a Business returning over £400, with good profits; an excellent opportunity for young man about commencing business, and to an immediate purchaser would be sold cheap; present proprietor going into a larger business. Address, L., G. Treble & Sons, Gloucester Street, London, N.

OLD-ESTABLISHED BUSINESS in main thoroughfare in Liverpool; well-stocked double-fronted shop; average returns for last four years over £700; price about £400; large house and premises; rent, £90; let off about £30; capital opportunity for energetic man, as business is capable of being greatly increased. Apply, F. S., 214 Chester Street, birkenhead.

TOR IMMEDIATE DISPOSAL, in consequence of the death of the Proprietor, a well-established Drng Business in the eentre of chief street, Monmouth; to he had for valuation of stock and fixtures; convenient house and premises; very low rent. Address, Mrs. Young, Monnow Street, Monmouth.

A GENUINE LIGHT RETAIL BUSINESS FOR DISPOSAL, owing to failing health; established 12 years; situate in a most respectable and pleasant residential thoroughfare in the Borough of Leeds; good house, shop, &c.; rent, £40; returns upwards of £500; price, £600. Apply, Messrs. Hirst, Brooke & Hirst, Wholesale Druggists, Leeds.

TO CHEMISTS AND DRUGGISTS.—For Disposal an Old-Established Business, earried on by the late proprietor 46 years; in the best situation of a large and improving village in Derbyshire; convenient house, with private entrance, garden, stable, good yard, and warehouse. For particulars of stock, fixtures, &e., address X., Eckington, Chesterfield.

FOR IMMEDIATE DISPOSAL.—An old-established Business in a large manufacturing town in Yorkshire; general retail trade, with a good wholesale connection in the surrounding district; returns about £5,000 per annum, which could easily be increased. Apply to Langton, Edden & Co., Upper Thames Street, London.

TO BE DISPOSED OF, in one of the principal thoroughfares in Liverpool, a genuine Chemist and Drnggist's Business, successfully carried on by the late proprietor for upwards of 30 years; landlord would grant a lease. For particulars, apply to Messrs. Evans, Sons & Co., Hanover Street, Liverpool.

MR. HINE GILBERT, Chemist's Transfer Agent, has for Sale a sound high-class Business in the main street of a large Southern city; returns, even under adverse circumstances, £650; good house, and valuable tease and stock; price £500, lowest. Photographs of this, and numerous others in all parts of England, to be seen at the Offices, 17 Hart Street, Bloomsbury Square, London, W.C.

FOR DISPOSAL, an old-established (1826) Retail and Dispensing Business, in an Agricultural district of a Midland county; market town, population over 5,000; on a main line of railway, about 40 miles from Loudon; splendid premises, ample warehouse room, and large garden. Further particulars on application to "Chemicus," N., Office of THE CHEMIST AND DRUGGIST, 44A Cannon Street.

POR DISPOSAL BY PRIVATE CONTRACT.—A First-class Dispensing and light Family Business, 20 miles out of London; proprietor going to a warmer climate; business only changed hands once in 50 years; introduction given to end of August; cash required, £1,000. For full particulars, apply to A. Y., care of Messrs. Edwards & Son, 157 Queen Victoria Street, E.C.

MANCHESTER.—An established Family Retail and Dispensing Business (in main thoroughfare), on low rental, with extensive plate-glass frontage; average returns for last four years, £716 per annum; references, Mr. C. A. Johnstone, Messrs, J. Woolley, Sons & Co., Mr. S. Whitehead, and Mr. Wm. Mather, Manchester; satisfactory reasons for selling. For particulars, A. Z., care of Messrs, J. Woolley, Sons & Co., Manchester.

IN SHEFFIELD.—A thoroughly Genuine, Ready-money, Retail Drug and good Patent Medicine (at full price) Business for sale; good shop, plate-glass front, main thoroughfare, very good house, five storeys high, at low rent; established 22 years; profitable returns; might be doubled; satisfactory reason for disposal. Address, "Chemist," care of James S. Bartlett, Esq., 85 Queen Street, Sheffield.

FOR DISPOSAL.—A Mixed Chemist's Country Business, which has been successfully carried on by the present proprietor for upwards of 12 years; incoming, including stock in trade, fixtures, and goodwill, about £400; full particulars, and satisfactory reasons for relinquishing same, will be given. Address, "Bona-fide," 5 Rosalyn Terrace, Walcot Park, Redlaud, Bristol.

A GOOD LIGHT RETAIL and Dispensing Business, 12 miles from London; returning £20 a week; handsomely fitted shop, large house, private entrance, garden, &c.; rent £65; long lease; none need apply with less than £900 cash; selling on account of having bought a larger husiness. Address, "Beta," care of Southall Bros. & Barclay, Birmingham.

FOR IMMEDIATE DISPOSAL (with lease), the old-established Retail Business of F. J. Clarke, 214 High Street, Lincolu; situate in the most ceutral part of the city; returns about £2,000 (per annum, and capable of great extension; an excellent opportunity for an euergetic man; references, Messrs. Maw & Co., and Barclay & Sons, Loudon; Clarke & Co., York. Full particulars upon application to the owner.

FOR DISPOSAL, in the Midland Counties, an old-established and genuine Drug Trade in a country town, population about 8,000; no opposition; returns nearly £1,000 per aunum; rent £21; good house and business premises; vendor retiring from the business; cash price £750. Applications to be made to Mr. F. Fletcher, Messrs. Wyleys & Co.'s, Coventry.

TOR DISPOSAL.—In one of the principal towns of the West Riding of Yorkshire, and in one of the principal streets, a Chemist's Business, doing a Mixed Trade; established over fifty years; rent £75; premises suitable for doing a Wholesale and Retail Trade, or for the introduction of proprictary articles; stock and fixtures at valuation; about £500; only a small goodwill required; present proprietor retiring from III health; a good oportunity for an energetic young man. Address, B. W., care of Messrs. Herrings & Co., 40 Aldersgate Street, London.

IMMEDIATELY, in consequence of the failing health of Proprictor.—A Genuine Ready-money, Light Retail and Prescribing Business, in one of the most rapidly improving villages in East Lancashire (the only Drug Business within a two-miles area); double-fronted shop, well fitted up and stocked; good house; convenient premises; rent low; lease if required; ample scope for dentistry; returns last year upwards of £500, with good profits; an excellent opportunity for an energetic man; stock and fixtures at valuation, about £250. Apply, H. H., Messrs. Woolley, Sons & Co., Market Street, Mauchester.

FOR DISPOSAL, in one of the principal towns in the Eastern Counties, a good Mixed Retail Business, situated in the most populous part of the town; returns about £1,250; good shop, double frontage; also commodious house and garden. Also a Flourishing Old-established Retail Business, in one of the central streets of a large town in the Eastern Counties; returns about £750. Also in a good country market town in Suffolk, a light Retail Business, successfully carried on for many years by present proprietor; returns about £600, including some good proprietaries; incoming very reasonable. For terms and particulars, apply to Grimwade, Ridley & Co., Ipswich, and 82 Bishopsgate Street, London.

PARTNER SHIPS.

PARTNERSHIP.—A Gentleman, in a large way of business as a Chemist and Mineral Water Manufacturer in a large city South, with a capital of £3,500 embarked, is desirous of meeting with a young cnergetic Working Partner with £400 capital; good opportunity for an Assistant unsuccessful in passing. Apply to Mr. Hine Gilhert, Anctioneer and Valuer, 17 Hart Street, Bloomsbury Square, London, W.C.

PARTNER required, in a well-established Chemical Apparatus Business; capital about £2,000. Further particulars, principals or solicitors only, A. B., care of Messrs. Houghton & Byfield, 85 Gracechurch Street, London.

SITUATIONS AT HOME.

The Proprietors of "THE CHEMIST AND DRUGGIST," anxious to make their Journal more than ever, the medium of communication between Employers wanting Assistants, and Assistants wanting Situations, have decided henceforth to print that class of Advertisements on a separate sheet, as well as in the body of the Journal, and this separate sheet will be forwarded post-free to any address on the 15th of the month on receipt of a penny stamp. The Proprietors will be much obliged if Chemists' Assistants will make this announcement known as generally as possible, as it is in their interest that the plan is proposed.

EMPLOYERS WANTING ASSISTANTS.

Advertisements are inserted under this Heading at a charge of 4s. 6d. for 7 lines and under; every additional line, 6d., payable in advance.

WANTED, next month, an Assistant (outdoor) to a Shipping Business, State age, experience, salary required, &c., to Messrs. Treharne & Duck, Chemists, Bute Docks, Cardiff.

Wanted, a good Laboratory Man; experienced in manufacturing the B. P. Preparations, Artificial Essences, &c. State age, references, and salary required. Apply, by letter, to Sang & Barker, Edinburgh.

WANTED, a steady respectable Young Man, as Chemist's Assistant, in a country town, to a General business of Chemist, Grocer, Wines and Spirits; references required. Apply to R. Eurgess, Chemist, Winsford, Cheshire.

OT. LEONARDS-ON SEA.—Wantel, an Assistant for a light Retail and Dispensing Business; one seeking a permanency preferred. Please state salary required, and enclose carte if convenient, to Arthur J. Taylor, Chemist, St. Leonards-on-Sea.

[PEMPORARY ASSISTANT; for a Watering town in Wales; must be a neat and accurate Dispenser, of good address, and accustomed to a genteel family trade. Apply, stating salary, indoors, and references, to J. Cole, Chemist, Aberystwith.

WHOLESALE DRUG TRADE.—Head Warehouseman required; none need apply unless thoroughly acquainted with all the duties of the situation; state age, where last employed, and salary required. Address, Langton Harker Magg, 15 Lawrence Pountney Lane, London, E.C.

A COMPETENT, obliging Assistant, aged about 25, for a first-class light Retail and Dispensing Business; £40 per year; indoor; two evenings a-week, and Sundays up to 6 p.m., free; satisfactory references required. Address (enclosing carte, returnable), J. W. Bennett, Chemist, Plymonth.

DENTIST and DRUGGIST.—Wanted, an indoor Assistant in a Mixed Drug Business; must be a good practical Deutist; payment by fixed salary, and liberal commission on dentistry; character must bear investigation. Address, with usual particulars, "Beta," Messrs. Woolley, Sons & Co., 69 Market Street, Manchester.

WANTED, a good competent Assistant; must be a quick and accurate Dispenser, and of good address; well-up in Prescribing, and capable of Managing in the absence of the principal; aged about 22; Minor qualification preferred; unexceptionable references requirred. State all particulars, with carte de visite, to J. A. Spargo, 1 Pier Terrace, Lowestoft.

APPRENTICES WANTED.

WANTED, an Apprentice; hours short; comfortable home. Particulars as to premium, &c., from W. L. Preston, 71 Market Street, Daltouin-Furness.

J. L. DENNIS, Chemist, Alfreton Road, Nottingham, has a Vacancy for an educated Youth as an Apprentice; time allowed for study and recreation, and domestic comforts considered; premium moderate. Sole proprietor of Dennis's Vegetable Essence for Coughs, Colds, and Consumption.

ASSISTANTS WANTING SITUATIONS.

- Assistants Wanting Situations have the liberty of inserting advertisements of 12 words for 1s.; every additional 3, 4, or 6 words, 6d., payable in advance.
- Please note that replies to Advertisements ordered to be addressed to Post Offices are liable to be forwarded to the Dead-Letter Office.

OCUM TENENS. Mr. Baker, 3 Spital Street, Guildford.

AS MANAGER or ASSISTANT; temporary or permanent. 6 Princes Square, Kennington Park, S.E.

AS ASSISTANT; by a Young Man; aged 21; accustomed to a Mixed Trade. J. M., 2 Wood Street, Halifax.

AS IMPROVER, or Junior, in a good bouse of business; 4 years' experience. E. J. Underhill, Oswestry, Salop.

A SSISTANT; country preferred; outdoor; 11 years' experience; aged 26; disengaged. C. S. A., 78 East Road, London, N.

AS JUNIOR ASSISTANT, or Improver; aged 20; can Extract Teeth. G. C. Smith, Montagne Mews, Richmond, Surrey.

CITUATION, about June; London preferred; highest reference; registered Dentist. T. Atkinson, Little Beck, Kirkby Thore, Penrith.

AS ASSISTANT, Minor, with a view to Succession or Partnership; good experience; bighest references. Apply C. J., Harrowden Road, Wellingborough.

DERMANENT, or for a Time (town or country), as Manager or Dispenser; registered; good experience and reference. X. Y., Messrs. Millard's, Cbarterhouse Square, Loudon.

AS ASSISTANT, or to Manage a Branch; 10 years' experience; first-class references; married; outdoor. Address, J. R. P., care of Mr. Gco. Pointon, 122 Aston Road, Birmingbam.

CHEMISTS.—Wanted, to place a well-educated Yonth as Indoor Apprentice to a thoroughly-established Chemist in London; premium paid. Address, W. C. J., 53 Aldermanbury, London, E.C.

TEMPORARY, or Locum Tenens, by the Week, Month, or otherwise, in town or country, by a registered Chemist; unexceptionable references, S. C., 8 Ennersdale Road, Hether Green Lane, Lewisbam,

R. E. BUNN, Temporary, Locum Tenens, Dispenser, or Manager; moderate terms, and excellent references; London, Brighton, and general country experience. Present address, 12 Unity Place, Woolwich, Kent.

WHOLESALE DRUGGISTS.—A Gentleman, who has represented two well-known Drug Houses, is open to Re-engagement as Traveller; first-class references; good salesman. "Rhei," care of Messrs. Smith & Sons, Wholesale Druggists, Norwich.

A GENTLEMAN, aged 20, who has had experience in the Drur Trade, and now Dispenser, Book-keeper, &c., to a Surgeon, desires Engagement with a Chemist, or in a Dispensary, with time for study; nnexceptionable references from present employer as to character and ability. Wm. Devereux, Bromyard, Worcester.

MISCELLANEOUS.

CHOP FIXTURES OF DRUGGIST'S SHOP.—Counters, Bottles, Glass Cases, Globes, &c., &c., either in one lot or separate, or will sell the whole as a going concern. Apply, J. Winter, 18 Lee Br.dge, Halifax.

TO TEMPORARY AND WHOLESALE REGISTERED ASSISTANTS.—Two Unfurnished Rooms, with use of Kitchen, at a Chemist's, in a good suburb of London, to be Let; rent will be taken in form of assistance in the business in spare time; satisfactory references required. Apply to "Alpba," Messrs. Knight & Co., 3 Abchurch Lane, E.C.

PATENT MEDICINES.—Agency Wanted for the Sale of Patents and Sundries in Ireland, by an Established Firm doing business for one of the first London Drug Houses. P. M., care of W. H. Smith & Co., Dublin.

BEST SEIDLITZ POWDERS.

Sumplies the above, loose, at 7/- per gross; and in boxes at 8/-, 9/-, and 10/- per doz., through the Wholesale Houses, or from 29 OLD STREET, LONDON, E.C.; and will forward list of articles packed by him on application.



See page 23.

APERIENT FRUIT LOZENGES.

Prepared from the bark of the Rhamnus Frangula, a medicine which has been described on high authority as "the only real aperient we bave"; all others usually classed under that name being drastic in their operation and often injurious in their after effect. They are extremely palatable, and children take them readily as a sweetmeat. "Mild and uniform in their operation."—Lancet. "The lozenge is an excellent and exceedingly mild force of laxative, especially suitable for children and delicate people."—Birmingham Medical Renew. "They are very mild, and will probably be found very useful for children and delicate women."—Medical Times and Gazette. "These Lozenges are now extensively prescribed by several of the leading medical men in London and other cities. They are not to be considered a patent or quack medicine in any respect."—The London Medical Record.

The attention of the profession and of pharmacists is especially called to these Lozenges. They are extremely palatable. Children take them readily as a sweetmeat.

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The above quality has never before been offered in the English market. Its immense sale has heretofore been confined to America and West Indies It is offered with the positive assurance that it is unequalled, and a successful rival with all other fine Toilet Waters.

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Restorer

Never fails to restore Grey Hair to its youthful colour, imparting to it new life, growth, and lustrous beauty. Its action is certain and thorough, quickly banishing greyness. It is not a Dye. It ever proves itself the natural strengthener of the Hair. Its Superiority and Excellence are established.

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PRIZE MEDAL PRIZE MEDAL AWARDED AWARDED PHILADELPHIA PARIS 1878 1876.

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-may we say of both sexes-should ask for "Allen's." "It is no figure of speech to say —may we say of both sexes—should ask for "Allen's." "It is no figure of speech to say "that the daintily-made rolls contain less paper than tobacco, and that the latter is pure and nnadulterated American. Whether the snoker indulges in "the Richmoad Gem," with or without month-pieces—the latter for choice—"The Pet" Cigarettes, or "Napoleon's "genuine Perione, his experience will be entirely satisfactory. The Tobacco is of the most exquisite quality. In fine, both as regards flavour and construction, Messrs, J. F. Allen & Co.'s Cigarettes thoroughly deserve recommendation. All Tobacconists supply them.—Vide The Illustrated Sporting and Dramatic News, June 15, 1878.;

TO PIPE SMOKERS.

A CORRESPONDENT writes: —"The 'RICHMOND GEM MIXTURE;' is delicions and remarkably well compounded; this Mixture should only be smoked indoors, it is far too good to be wasted 'on the desert air.'

"The 'RICHMOND GEM CURLY CUT' is also excellent, and it is difficult to choose between this and the above, but I think the turn is just in favour of the Mixture;' this is also almost too delicate a flavour for out of door use to enjoy it as to choose

"The 'IMPERIAL BIRD'S EYE' is a pleasant, clean-smoking, fragrant Tobacco, capital for Yachting, Fishing, Shooting, or in fact any other out-of-door

one thing with all these Tohaccos, they do not cake, or go hard in the pipe, however tightly filled, and they burn to the very last grain; nor do they elog the pipe as other Tobaccos do, requiring frequent scraping; the absence of Nitre, besides saving the burning of the tongue and parching the throat, so usual with other Tobaccos, affords the luxury of a dry pipe to the last, there is no 'wobbling' to be heard a yard off."

TO EXPORTERS OF TOBACCO.

Riehmond, Virginia, July 1, 1878.

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"We beg to inform you that we have appointed Messis. Henry & Co. Sole Agents for Great Britain for the sale of our Tobaccos and Cigarettes. We have also given them the entire charge of our London Expert and Shipping Trade, and take leave to refer you to them for quotations. Messis. H. K. Terry & Co. have been acting as our Agents since the first introduction of our goods in Great Britain, and our experience of their business transactions hitherto gives us perfect confidence that their appointment will be attended with the most satisfactory results, both to you and us, in the future. Thanking you for your liberal patronage in the past, and respectfully soliciting its continuance, we remain, your obedient servants,

"J. F. ALLEN & CO." TOBACCOS and CIGARETTES (the Name and Trade Work when a servants).

J. F. ALLEN & CO.S TOBACCOS and CIGARETTES (the Name and Trade Mark upon every Package) are sold by all first-class Establishments throughout the UNITED KINGDOM, INDIA, and the COLONIES.

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STIMULATING QUICKENING PLANTS, THE PRODUCING A RAPID AND DEVELOPMENT

This valuable Preparation is the result of several years' exhaustive trials, and it is searcely possible to speak too confidently of it.

Plants of all descriptions, from the best known to the rarest and costliest, develop their blossom and foliage with extraordinary quickness and beauty when the Florvita is applied to them. So also with Fruits and Vegetables, which, under this treatment,

reach perfection with great rapidity.

To ladies who take an interest in their flowers, both indoors and out, Florvita particularly recommends itself; for though chemically it represents a very highly concentrated fertiliser, it has not the appearance or character of what is known under the head of

"Flower Manures," being a delicate pink powder soluble in water, with a most agreeable bouquet.

From THE GARDENERS' CHRONICLE.

"A boon which amateurs, and lady gardeners especially, will welcome. According to our experience of a small quantity, it is readily dissolved in water, can be applied to plants grown in rooms without the least objection, and well answers its purpose as a fertiliser."

Extract from Report of Dr. Augustus Voelcker, Professor of Chemistry to the Royal Agricultural Society of England, 7th June, 1878.

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"A preparation so rich in Soluble Phosphates, Salts of Ammonia, Nitrates of Potash and Soda, as your Florvita, I believe, may also be used as a highly concentrated fertiliser for vegetables and every kind of kitchen garden produce."

From The Horticultural Record.

"The results of our experiments upon plants in small pots made with this material, by contrast with equal numbers similarly treated, but with ordinary water, are truly surprising."

DIRECTIONS FOR USE.—One teaspoonful of the Florvita to be added to each gallon of water used. The plants should be watered with it once or twice a week.

Prepared only by PRENTICE BROS., Chemical Laboratory, STOWMARKET.

Sold in Bottles, 1/- and 2/6 each, and in Jars of 18/- and 36/- each.

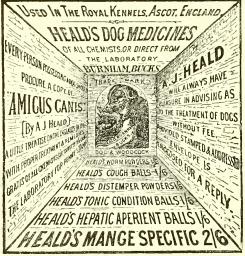
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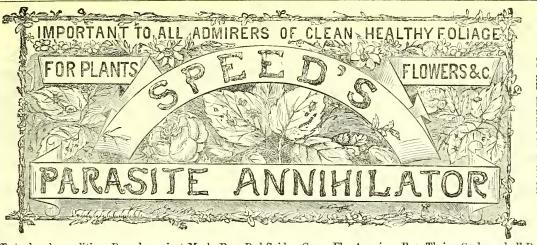
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N effectual and expeditious Remedy against Mealy Bug, Red Spider, Green Fly, American Bug, Thrips, Scale, and all Parasites A Reflectual and expectious Remedy against Mealy Bug, Red Spider, Green Fig, American Bug, Thrips, Scale, and all Farasites infesting Vines, Plants, Shrubs, &c. The following Testimonial, amongst others, has been received:—From Mr. D. Thomson, Gardener to His Grace the Duke of Buccheuch, Drumlanrig Castle.—"I duly received the jar of your Insect 'Annihilator' and Sprayer, and, after having tested it according to your directions, I find it to do most effectually all that you claim for it. I applied it to mealy bug, the grey scale, thrips, and red spider, and its effects are quite magical. It seems to dissolve the mealy bug into a reddish-brown pulp in a minute, the thrips does not live in it even two minutes, and the scale seems 'done for' in ahout ten minutes, after which time it washes off, scale and all, perfectly clean on heing syringed with clean water. We tried it on Ferns, Eucharis, Dracenas, Marantas, and Crotons, and not one of these are in the least injured." Sold in Bottles, containing 1 pint, at 1s. 6d.; 1 quart, at 2s. 6d.; and 2 quarts, at 4s. 6d., each with full directions for use. Vaporisers for applying the Annihilator, 2s. each.

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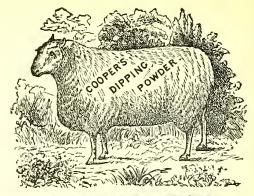
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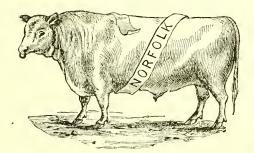
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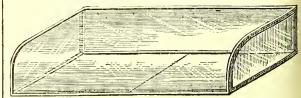
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Original Patent Leather & Cloth Restorer. MAKES OLD BINDINGS LOOK NEW.

Every person their own brokbinder. Full and simple directions.

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All who value their Books should try it. This will restore all Leather and Cloth on Books, Desks, Dressing Cases, Office and Library Tables, &c., as when new.

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Sold by all Stationers, Faney Dealers, &e., throughout the United Kingdom, in 6d., 1s., and 2s. 6d. Bottles; or post free for 8, 13, or 30 stamps, from the Sole Proprietors—

BRIEN & CO., 53 TABERNACLE WALK, FINSBURY SQUARE, LONDON, E.C. To be had Wholesale of Messrs. Mather & Son. Farringdon Road; Barelay & Sons, 95 Farringdon Street; Edwards, 157 Queen Victoria Street; Maw, Son & Thompson, 7 to 12 Aldersgate Street; Milard & Sons, 40 Charterhouse Square, E.C.; Sutton, Bow Church Yard; Sanger & Sons, 150 and 252 Oxford Street; and all Wholesale Houses.

AFTER READING THIS SEND FOR A BOTTLE.

Of any size, in the very best quality that can possibly be made. Large stock kept in London. Any buyers of these goods should compare my Samples and Prices before ordering elsewhere.

METZ, PAUL **M**anufacturers' Agent,

19 & 20 HAMSELL STREET, FALCON SQUARE, LONDON, E.C.

Bankers, London and Westminster Bank, Lothbury, E.C.

SPONGE.

PETERSON & CO., Importers.

66 SOUTH JOHN STREET,

LIVERPOOL.

For Home, Foreign, and Colonial Markets. Wholesale only.

TRADE MARK



A. STEVENS, Chemist and

ESTABLISHED 1868.

J. T. JONES.

Manufactory, Edith Row, King's Road, Fulham, S.W. (Formerly with Mr. Jas. Ewans, Garlick Hill, City),

CLARIFIER FINE LARD, OF MARROW, SUET, AND OILS.
ADEPS. PHARM. PRÆP. BENZ. P. B., &c.
PRICES ON APPLICATION.

VEGETABLE BEST

For Covering Jars, Wrapping up Soap, Chemicals, Explosives, &c.

FANCY PAPER, TINFOIL, AND TINFOIL PAPER.

Samples and Prices post free on application.

Ð. BECKER & CO.,

30 Little Trinity Lane, Queen Victoria St., London, E.C.

EWENS' CLARIFIED LARD, MARROW, suets, and oils.

JAMES EWEN & Sons are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most

delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (vide P. J. Vol. I., No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,

5 HATFIELD STREET, STAMFORD STREET, S.E.; Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.

MERCHAN'

SUNDRYMAN, RESSERS'

And Importer of Perfumery & Fancy Goods, 5, 6, & 7 HOLBORN BARS,



TRADE MARK.

LONDON, E.C.

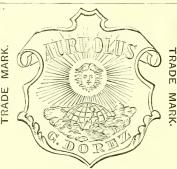
TRADE MARK.

COMBS, BRUSHES, MIRRORS, CUTLERY FRENCH PERFUMERY-ED. PINAUD'S and DEMARSON, CHETELAL & CO. ...

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THESE COMBS BEAR THE NEAREST RESEMBLANCE TO IVORY.

For the



This preparation produces one of the most beautiful and fashionable tints that have been conveyed to the Human Hair. It converts Hair of any colour to tints varying from the richest auburn to the most brilliant golden or sunny hue. It is perfectly harmless and free from smell. In all instances it has given the greatest satisfaction; and is, as a genuine and profitable article, recommended to the Trade. Pamphlets and Handsome Show Cards. 5s. size, price 30s. per dozen.

Sole Agent: C. J. KING. London.

The only true Universal & Genuine Article. Distilled from the leaves of the Bay Tree (Myrciactris). THIS ARTICLE COMMANDS A READY SALE.

This delicate Spirit has acquired a great popularity in America and the West Indies. Ît is an indispensable Eau de Toilet for the Nursery and Bath, and is an effective remedy for Headache, Nervousness, and Rheumatic Pains. It also alleviates irritation of the skin after shaving or from change of temperature, and removes all impurities from the skin.

Much admired for its lasting fragrance.

This valuable toilet preparation for the Hair is highly recommended on account of its nutritive and restorative properties.

Attractively put up in Round Shouldered White Glass Bottles.

3 ozs. 4 ozs. 2s. 9d. 3s. 6d.

6 ozs. 5s. 3d.

8 ozs. 7s. per doz.

C. J. KING, 5, 6, & 7 HOLBORN BARS, LONDON, E.C.

SPONGIES

IN ORIGINAL PACKAGES.

Cases Free. Quotations subject to usual Terms.

		Description.	Price per Case.	Number of Pieces per Case.
334	Honeycomb,	Selected quality assorted sizes Finc ,, , Good ,, , Second ,, , Third ,, , Rough, for Stable use ,, Choice quality large bath sizes Fine ,,	* s. d. 10 18 0 8 12 0 6 18 0 4 18 0 3 12 0 2 10 0 6 14 0 4 15 0	70 65 65 65 70 100 18
0 1 2 3 4 5 6	Turkey, Cups,	Good " " Common " " First " small Second " " First " bath sizes Second " " First " assorted Toilet sizes Good " "	2 17 0 1 18 0 3 10 0 1 16 0 14 15 0 11 10 0 17 18 0 14 15 0	18 18 200 200 40 40 70 70
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SELECTED SPONGES.

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												£	8.	d.
Гo	nevc	omb					•••		•••	per lb	6/0, 8/0, 10/0), $12/0$ and 0	15	0
	,,			1						*	per lk	4/0 and 0	6	0
17	rkev.			ne Bath,					•••	•••	per lb. 30/0,			
-				ae Toile						9	,, 30/0,	- 4 10 - 0		
	22								• • •		,, 50/0,	So Jo and 2	U	U
	,,	,,		,,	fine, f	rom 8	3 to 18	to the	lb		,, 45/0,	50/0 and 3	0	0
	22	"	for th	ae Nurse	ery, fron	n 25	to 40 to	the lk	o	•••	,, 20/0,	25/0 and 1	10	0
	"	Eye		•••			•••				,, 12/0,	16/0 and 1	0	0
	"	Solid	, for	the Nur	sery, fro	m 25	to 40 t	o the	lb		,, 12/0,			
V	"	,,	for	the Toile	et, from	6 to	18 to th	ie lb.	•••		per lb. 12/0, 16/0	0, 20/0 and 1	5	0
	>0	Roug	h, su	itable fo	r Slates	, &c.	• • •				per lb. $4/0$,	6/0 and 0	8	0
	"	Carr	iage				• • •		•••		per lb. 8/0, 12/	0, 16/0 and 1	0	0
	'22	7 22	1	orown	•••					•••	per lb. $4/0$,	6/0 and 0	8	0

S. MAW, SON & THOMPSON,

7 to 12 ALDERSGATE STREET, LONDON.

AS USED AT ALL THE COVERNMENT MUSEUMS

Suited for any substance, from glass and cbina to leather, wood, or iron, and the articles joined bear washing in boiling water.

The large range of materials to which this cement is applicable, its transparency, strength, and facility in use, and the readiness with which it adberes, renders it, without doubt, THE MOST USEFUL EVER INVENTED. It is equally applicable to articles of the coarsest or the most delicate construction. The great success which attended its introduction, now more than 20 years ago, has given rise to a lost of imitations, under as many various titles, some of the se being of an exceedingly crude character, and most unsatisfactory to both vendor and buyer. The above celebrated Cement is uniformly prepared and neatly put no, and is guaranteed to remain nuchanged in any climate.

Professor ARCHER, C.B., F.R.S., &c., Edinburgh..."I can testify most unbesitatingly to its great utility in the various occasions which continually arise in Museum work for a first-rate Cement. I have invariably found yours superior to all others, and have extensively recommended its use to all my friends."

Sold in bottles at 1s. and upwards; sample bottles, 6d.

IMPALPABLE AND DELICATELY PERFUMED. This unique Powder possesses the emollient properties of fullers' earth, free from colour, and in a high condition of purity. Sold in boxes at 1s. and 6d. Wholesale at the Patent Medicine Houses and Druggists' Sundries Men, or from

FOULKES, Operative Chemist, Birkenhead.



JUDSON'S

1 Bottle Gold Powder Mixing Liquid 1 Mixing Bowl 1 Brush 1 Bottle Gold Paint Mixing Liquid

12s. per dozen sets. Six sets on a card, or each set in card box.

10s. 6d. per doz. sets. Six sets on a card, or each set in eard box.

For regilding picture and glass frames.
For gilding lamp stands and gas-fittings.
For renewing ormolu ornaments.
For illuminating on paper, silk, or leather.
For artistic cabinet work.
And for a thousand useful and domestic purposes.

COAGULINE."-

MARK. KAY'S New TRANSPARENT CEMENT for BROKEN ARTICLES.

"Clear as crystal," "stronger than glass," "tough as leather."

6d., 1s., 2s., in boxes or on cards. Show cards, handbills with name, &c., Specimens, &c., for home or export, free.

Specimens, &c., for home or export, free.

KAY'S COMPOUND ESSENCE OF LINSEED. "The Stockport Remedy," fo Coughs and Colds. Cures nine cases out of ten. In bottles, 9j.d., 1s. 1j.d., 2s. 9d., 4s. 6d., &c. Sold by all Chemists.

LINSEED LOZENGES.—(Solidified Linseed Tea).—An agreeable sweetmeat, most demuicent and nourishing, which may be taken in any quantity by Children and Adults, for their soothing and beneficent effect. Packets, 6d.

CHLORO-LINSEED COUGH LOZENGES.—A medicated Linseed Extract, to out-door use, on leaving a heated room, &c. Demulecut, Expectorant, Warming and Soothing. Packets, 6d.

LINUM CATHARTICUM PILLS (of the Purging Linseed). Purely vegetable; the most wholesome aperient and corrective for young persons and adults, Boxes, 9d., 1s. 1j.d., 2s. 9d., of all Chemists.

KAY'S TIC PILLS.—A specific and pure nervous Tonic. The best form of administering the Quinine, Iron, and other Tonics of which they are largely composed. Boxes, 9d., 1s. 1j.d., 2s. 9d., of all Chemists.

CUE CEMENT.—For Tipping Billiard Cues. 1s. and 2s.

For Circulars, Show Cards, Specimens, &c., address:—

KAY BROTHERS, Stockport.

Sold by all the Wholesale Druggists, Sundrymen, and Medicine Veudors.

Sold by all the Wholesale Druggists, Sundrymen, and Medicine Veudors.

THE BEST GOT UP AND MOST SALEABLE

IN THE TRADE.

It keeps its Colour and will not injure the most delicate fabric.



No. 1.—PETERS' ARGENTUM, contains usual size Bottle of Ink, Pcu, and New Square Stretcher.—Price 1s.

PETERS' ARGENTUM, contains Larger Bottle of Ink and Pen.—Price 1s.

No. 3.—PETERS' ARGENTUM, contains Bottle of Ink, equal to 12 of No. 1, or 8 of No. 2.—Price 5s. per case.

WATSON, Chemist, 22 ANGEL STREET,

SHEFFIELD.



ON OF PRICES

6d. and 1s. PEDESTALS, Glass Cases included.

20 per cent. off £100 Orders.

£50



GRANTED NOV. 28, 1877. INJUNCTION

COMMON PLEAS DIVISION, Jan. 15.

(Sittings hefore Lord Coleridge and Justices Grove and Denman.)

HICKISSON v. ASHTON. Defendant moved for a NEW TRIAL.

Application REFUSED.

Application REFUSED.

This action, which was brought for the alleged infringement of the Plaintiff 's Trade Mark, was tried at the last sittings at Guildhall, before Mr. Baron Cleashy, when the verdict was for the Plaintiff with damages.

The PLAINTIFF was the HUSBAND of the DAUGHTER of the late JOHN BUND, the PROPRIETOR OF BOND'S CHYSTAL PALACE MARKING INK. The Detendant was a Druggist, and he had sold a Marking Ink manufactured by a Mr. Murphy, and the Plaintiff complained that the Labels of Murphy's kink were an angle of the Complained was a proper of the plaintiff complained that the Labels of Murphy's kink were an angle of the Complained was a proper of the plaintiff complained that the Labels of Murphy's kink were and the Complained was a proper of the plaintiff complained that the Labels of Murphy's kink were and the Complained was a proper of the plaintiff complained to the pla

Their Lordships this morning, after consulting Mr. Baron Cleasby on the matter, refused the rule, that learned judge having expressed his satisfaction with the verdict.—RULE REFUSED. Vide daily papers.

ANOTHER GOLD MEDAL AWARDED,

PARIS ACADEMIE,

For Merit and Superiority of Finish, 2nd Award.

PRIZE MEDAL, PARIS, 1878, 2ND AWARD. 3 Gold and several Silver and Bronze Medals. Hon. Mention, Paris, 1878.

PRIZE MEDAL AND GRAND DIPLOMA, 8 Medals.] PHILADELPHIA EXHIBITION, 1876. [7 Diplomas.

PURVEYOR TO THE LORDS COMMISSIONERS OF THE ADMIRALTY. CAUTION.—The only GOLD Medal Marking Ink. Gold and Silver Medals and Diploma, Silver Medal and Diploma, London. Prize Medal, Lyons, Certificate of Merit, signed Albert Edward, Prince of Wales; and Dublin Diploma, Marking Ink Maker under Royal Warrant to Her Majesty the Queen and Court of Holland.

GOLD MEDAL, SOUTH AFRICA, 1877.

HONOURABLE MENTION and ESPECIAL NOTICE from the FRENCH PRESIDENT and H.R.H. the PRINCE OF WALES, Paris Exhibition, 1878. HONOURABLE MENTION and DIPLOMA awarded by the JURORS, 1878. SECOND GOLD MEDAL awarded by the PARIS ACADEMY, 1878, for Merit and Superiority of Production.

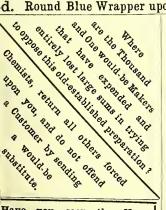
MARKING INK. J. HICKISSON, Proprietor of the Daughter of the late John Bond's Crystal Palace Marking Ink, 75 Southgate Road, London,

BOND'S MARKING INK.
CAUTION to Wholesale and Retail Vendors.—TAKE NOTICE that on Nov. 26th, IN AN ACTION 1877. "HICKISSON ANO-THER against MURPHY" JUDGMENT was given for PLAINTIFFS, WITH DAMAGES AND COSTS, AND A PERPETUAL IN-JUNCTION GRANTED RESTRAINING the said MRS. MURPHY and her AGENTS FROM USING the word "BOND" upon any lebels of the word "BOND" upon any lebels of the word "BOND" upon any lebels of the word "BOND" upon the word "BOND" upon any lebels of the word "BOND" upon any labels or pedestals manufactured by or for her, OR FROM IN ANY WAY REPRESENTING THE MANUFACTURED INK BY HER TO BE BOND'S

Bottles in Round Blue Cases (Grand Show Card enclosed with each Packet of one dozen) 30s.

(Handsome Show Card enclosed with each dozen) ... 60s. Do. do. do.

d. Round Blue Wrapper upon Show Card of one dozen 30s.



Have you seen the New Black and Gold Glass Cases with Hinged Black and Gold Framed Linen Specimen of the Crystal Palace with elaborate GOLD Mounts?



Blue Wrappers. Black and White Oval Label.

DEAR HICKISSON, — Send on receipt the £200 order, as we are much increasing our trade by pushing your Ink in place of useless Novelties, as some other Wholesale Houses are sending other Makers', and thereby the Retail are closing their accounts. The 50 No. 1 Glass Cases are sold. Repeat order immediate.—Yours,

BROWN & CO.

29/4/78.

No Heating Required if allowed to remain three hours previous to Washing.

No. 2 Case, containing 3 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, Black and White Oval Label, old style. 16s, each.

No. 3 Case, containing 1 doz. 1s., Crystal Palace and Royal Indelible, Blue Wrapper, old style, and 2 doz. 6d.. do. do. 11s. each.

No. 4 Case, containing 3 doz. 6d., Crystal Palace and Royal Indelible, Blue Wrappers, Black and White Oval Label, old style. 8s. 6d, each.

WILL PROSECUTE IN EVERY CASE OF MIS NOR COLOURABL





d.

3.

Highly recommended by the Lancet, Sanitary Record, and the Medical Press as an clegant
Antiseptic Toilet Soap for
the Skin, with an
aromatic disinfectant for the Apartment.

AKER & GROSSM REGISTERED COPYRICHT)

The Antiseptic properties of the Eucalyptus Tree are now fully retained hy enclosing the Soap in tinfoil, and any of the old stock on hand will be exchanged for fresh, free of cost.

The Standard says:—"As an antiseptic, Euca uptus Soap has no rival."

1s. 6d. Boxes of Three Tablets. 12s. per Dozen Boxes.

Special Articles particularly noted for their excellence:						
TOILET SOAPS. Per doz. BOUQUETS. Per doz. POMADES, &c. Per doz						
Cent-Fleur (copyright) 2/6 Boxes of 20/ Cent-Fleur (copyright) \ Cent-Fleur (copyright) 8/ 12/ 8 20						
1 12 Petroleum Pomade 12 & 18						
MIISK WINDSOF 116 101 Doon of Doubuman Thinks I Duitt' 11						
sandringham , 1/6 , 12/6 Stephanotis sprinkling 10/ Anglo Eau de Cologne 8/ & 12						
Eucalyptus Oil ,, 1/6 ,, 12/ White Rose Bottles. 24/ Eucalyptus Vinegar 12/ &-20						
White Cherry Tooth Paste 8 & 12						
TRADE FRICE LISTS SENT AND UNDERS EXECUTED THROUGH WHOLESALE HOUSES, OR DIRECT FROM THE MANUFACTURERS						
WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore St., City, London.						

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I guaranteed to contain the necessary quantity of GLYCERINE for effectually imparting to the SKIN the softening and healing properties for which GLYCERINE is so justly famed.

NECESSARY CAUTION.—This unrivalled Toilet Scap was originated by us in 1863, and solely by its superior merit and moderate price has now attained the patronage of a wide circle of all classes of society. As many (external) imitations of our saleable article are often falsely offered as the real Soap, all vendors should please note that the Box and Wrappers now bear our "Trade Mark," and not be misled by inferior counterfeits, thereby causing disappointment to purchasers, and consequent injury to the sale of the original and genuine Soap.

ls. 6d. Boxes of Three Tablets, 12s. per Dozen Boxes.

Trade Price Lists sent and Orders executed through Wholesale Houses, or direct from the Manufacturers,

WHITAKER & GROSSMITH, Wholesale Perfumers, 120 Fore Street, City, London.

CAUTION

In addition to A. S. LLOYD'S original signature on Label, each tube of GENUINE Euxesis bears the following distinctive marks:-

Firstly.—My full name, "Aimée Lloyd," on cap of Tube.

Secondly.—The words, "Prepared by his Widow," in raised letters on top of Tube.

Thirdly.—My Address, No. 3 Spur Street, Leicester Square, London, on both English and French Labels.

(Signed), AIMÉE LLOYD,

(Widow of A. S. Lloyd),

Sole Proprietor and Manufacturer of the GENUINE Lloyd's Euxesis.

RIMMEL'S NEW SANITARY APPLIANCES.

DIMMEL'S AROMATIC OZONIZER, a fragrant powder which, simply spread on a plate in apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of Ozone, the great air purifier. It is in use in the principal Hotels, Clubs, and Theatres, and also in the Saloons and Cabins of several Lines of Steamships. In 4 oz. tins, 1s.; by post for 15 stamps; 1 lb. tins, 3s. 6d.; Spreading Plate, 6d.

Dr. DAY, of Geelong, who has devoted much time and attention to sanitary questions, has discovered that alcoholic perfumes form excellent vehicles for diffusing ozone in the atmosphere and destroying noxious emanations and miasma. At his suggestion, E. Rimmel has prepared a series of Tollet Waters (Ean-de-Cologne, Lavender, and Florida), which are oxygenated by a chemical process, and evolve a quantity of Ozone. They are strongly recommended to be used on the handkerchief when attending growded places, visiting the sick, or travelling by land or sea; also to be sprinkled on beds or carpets, or on a pad hung up in the air. Dr. Day writes to E. Rimmel (November 28, 1877):—"In manufacturing and making known the hygienic value of oxygenated perfumery you will be conferring a great benefit to the public, for it is the best means of disinfecting bedrooms, closets, &c.

PRICES :-Rimmel's Ozonized Eau-de-Cologne 4 oz. round hottles .

EUGENE RIMMEL, Perfumer by Appointment to H.R.H. the Princess of Wales, 96 STRAND, LONDON.

ESTABLISHED PERFUMER 100 YEARS SOAPS PRICE LISTS ON APPLICATION. CHOICE PERFUMES IN BRISTOW'S SPECIALITIES. SOAPS. Zinc, Sulphur, Petroleum, ed. & 1/ Petroline, Juniper Tar, & 4/ & 8/ other Medicat d Scopps... doz. Glycerine Jely, 6a. and 1/ stoppered bots., 4/ & 8/ PO

BISHOPSGATE AVENUE, LONDON,

Needham's Polishing Paste,

For Cleaning Brass, Copper, and Britannia Metal Goods, &c.

Pickerings' Razor Paste,

For Sharpening Razors, &c.

Waterproof Harness Blacking,

For Black Leather Harness.

DIPLOMA OF MERIT, VIENNA EXHIBITION, 1873 Joseph Pickering & Sons (J. Needham), Albyn Works, Sheffield, MANUFACTURERS OF



CHEMISTS, GROCERS, IRONMONSERS, ETC

Sheffield Knife Powder.

For Table Knives, Fire Irons, &c.

Plate Powder,

For Electro-plated Articles, &c.

Furniture Polish.

For cleaning French Polished Furniture, &c.

Brunswick Black,

For all kinds of Iron Work.

Retail, 1/, 1/9, and 3/6; Wholesale, 9/, 15/, and 30/ per doz. This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for Wholesale Agencies to be made to the Sole Consignee, THOMAS WEST, Chemist, Stretford, Manchester.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

PRICES, IN PACKETS, 1s. 6d., 2s. 6d., & 4s.

Full Directions for use with each Bottle.

NOTICE.—The Gold Paint is so easy of application, economical in use, and excellent in appearance, that it is extensively employed in the Ornamental Gilding of Decorative Mouldings, Carvings, and all Fancy Ornaments made either of Metal, Wood, Porcelain, or Plaster, and the effects that can be produced, even by unskilled hands, make it useful to all engaged in fancy or home embellishment.

A Copper and Silver Paint, at the same prices, and yielding equally good results, can be obtained.

Sold by all Wholesale and Retail Artists' Colourmen and Druggists' Sundriesmen.

SOLE MANUFACTURER OF THESE SPECIALITIES,

RICHARD J. ALLEN.

Mansfield Place, Kentish Town, N.W., London.

BEST QUALITY, with Elastic Vagina Pipe and Shield, and Bone Rectum Pipe, in Slide Cedar Boxes, per doz. 28s.

Sample to any City Drug House for enclosure 34 stamps, or quarter dozen P.O.O. for 7s.

CENTRETON, MHOL 204 CITY ROAD, LONDON. E.C.

FOR CLEANING PLATE.

BRADLEY & BOURDAS'S ALBATUM or WHITE ROUGE,

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quarter of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 7 Pont Street, Belgrave Square, and 48 Belgrave Road, London, S.W.



For more than a Quarter of a Century this Powder has sustained an unrivalled reputation throughout the United Kingdom and the Colonies as the BEST and SAFEST article for Cleaning Plate.

Sold in Boxes, 1s., 2s. 6d., and 4s. 6d. each. Also

GODDARD'S FURNITURE CREAM. Sold in Bottles, 6d. and 1s. each. Sold by leading Wholesale Houses and Factors, and by the Inventor.

J. GODDARD, STATION STREET, LEICESTER.

FERRIS COMPY'S

THYMOL, THE NEW ANTISEPTIC AND DISINFECTANT.

THYMOL, a newly-discovered Crystal prepared from Wild Thyme (Origanum Vulgare), is pronounced by some of the most eminent Chemists and Physicians in Europe to be far superior to, and stronger than, Carbolic Acid, Coal Tar, or any other of the Antiseptics and Disinfectants hitherto known. It has been shown by the experiments of Lewis and Bucholtz to be about eight times as powerful as Carbolic Acid.

It has also the very great advantage of being QUITE HARMLESS, and possesses the DELICIOUS and FRAGRANT ODOUR of WILD THYME.

PURE

Manufactured by them with their Pure Crystals of Thymol, is confidently recommended as one of the very best and most elegant Soaps ever introduced to the Public.

It is adapted for the TOILET as a SKIN SOAP, as an ANTISEPTIC SOAP, and FOR GENERAL FAMILY USE.

An easy test of its effectiveness is, that it at once and completely removes the odour of Tobacco Smoke. See that each Cake bears our registered Trade Mark.

Sold in Tablets, 6d.; or in Boxes, containing 3 large Tablets, 1s. 6d. per Box.

SOLE MANUFACTURERS-

FERRIS, BOORNE, TOWNSEND & BOUCHER.

Wholesale and Export Druggists and Chemists to the QUEEN,

BRISTOL.

And may be procured through all Chemists.

LONDON AGENTS — Mossrs. Lynch & Co., 171a Aldersgate Street, E.C.; Messrs. Wm. Edwards & Son, 157 Queen Victoria Street, E.C.

CERINE

CHEMICALLY PURE GLYCERINES.

Sarg's Double Distilled Glycerine, Chemically Pure,
30° Beaumé, in Cases of Four 56-lb. Tins each; Twenty 5-lb. Bottles, Fifty 1-lb. Bottles, and 100 \(\frac{1}{2}\)-lb. Bottles,
with Registered Label.

Sarg's Double Distilled Glycerine, Chemically Pure,

In 1-lb, and 1-lb, Bottles, should have a place in every nursery on account of its salutary action on the heads of children, relieving them from dandruff and the roughness of the scalp they are so commonly subject to.

Sarg's Distilled Glycerine, Chemically Pure, P.B., 29° Beaume, in Cases of Four 56-lb. Tins each.

Crude Glycerine, in Bulk.

TOILET GLYCERINE ARTICLES.

Transparent Glycerine Soap,
In registered Packets of three Tablets, 1s. Warranted to contain 33% of the purest Glycerine. Also in round Tablets, three in a Box; and in oval Tablets in paper.

Liquid Glycerine Soap,
Best preventive against chapped hands, 1s., and unrivalled
for imparting softness to them, and rendering them clean and
white. See Testimonials of Professor J. von Liebig, Baron; and of Professor F. Wöhler.

Scented Glycerine,

In Bottles at various prices. Either pure or diluted with water, this Glycerine is very successfully used for softening the skin, preserving the complexion, and preventing the very unpleasant roughness of the skin in cold weather.

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Is quite unequalled for imparting a fresh and healthy colour to the lips and keeping them from chapping.

Sarg's new Carbolic Glycerine Soap, In Boxes of three Tablets, is highly recommended as a most effective disinfectant.

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Thymol, from Wild Thyme—ORIGANUM VULGARE—is an irregular crystal, nearly transparent and colourless f a burning and aromatic taste, freely soluble in alcohol, æther, or chloroform; and so powerful is it as an antiseptic, that ve-tenth of one per cent. of Thymol has been found to arrest saccharine and lactic fermentation, which places this substance ven higher in rank than Carbolic or Salicylic Acids.

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Wholesale. 4s. per dozen.

s a great improvement upon the "Dental Syringe," as the fluid is contained in a glass bulb, which enables its contents to be seen, also prevents the liability to evaporation through long keeping or exposure.

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N.B.—Both the above are exempt from Stamp Duty by permission of the Board of Inland Revenue.

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A DELIGHTFUL, REFRESHING, AND FASHIONABLE PERFUME.

"Chemists may gratify their loyalty to their hearts' content by selling a perfume just introduced by Mr. B. Robinson, of Pendleton, Manchester, ailed 'The Empress of India's Bouquet.' The perfume is remarkably cheap, and is by no means lacking in richness. The shilling bottles are good sized ones, corked with the patent sprinklers, and decorated with a faithful likeness of the Empress alluded to."—Editor of The Chemist and Druggist,

November 15th, 1876.
Sold in Bottles, at 1s. each, or Treble Size, 2s. 6d.; Wholesale, 8s. per dozen in 1-dozen cases, and 20s. per dozen in 1-dozen cases.

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Prepared only by B. ROBINSON, Operative Chemist and Distiller, PENDLETON, MANCHESTER.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a tresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate.

N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopoxia.

Part by Part

| Per lb. | Per lb. | Per lb. | Aqua Cinnam. Ver. Concent. 6/0 | Aqua Freniculi. Concent. 4/0 | Aqua Pimentæ, Concent. 4/0 | Aqua Pimentæ, Concent. 4/0 | Rose | Ro

The above are put up in Bottles of 11b. or 11b. and upwards, each of which has the Inventor's Protection Label over cork.

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B. ROBINSON, Operative Chemist, Distiller and Brewer of British Wines, Manchester.

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TRADE MARK. NO. 14389.

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Not less than 2 Gallons, 56° o.p., 20/6; 60° o.p., 21/0 per Gallon.

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FOR TINCTURES, ESSENCES, PERFUMES, &c., OXFORD ROAD DISTILLERY, MANCHESTER.

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Special quotations for large quantities. Terms-Cash on Delivery. Jars to be returned or paid for.

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£12 10s. per Quarter-Cask of 27 Gallons. £6 5s. per Octave

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VIOLET POWDER

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Garants sed Manufactured from
Park Stand Pander Richly Perfamed
PRICE ONE PENNY PER PACKET.

Wholesale & Export Manufacturers of Druggists' Sundries, &c., 376 CITY ROAD. LONDON. E.C.

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Any of the above goods may be had through all Wholesale Houses.

Price List or Samples free per post on receipt of business card.



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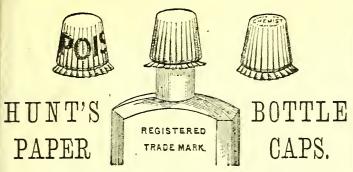
This old-established and increasingly favourite Dentifrice has been Forty Years before the Public It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

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and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered. Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

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By Machinery Patented in England, France, and Germany.

PLEATED IN A STYLE IMPOSSIBLE TO IMITATE BY MANIPULATION. PER GROSS BOX.

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	FIVE SIZES.				48	49	51
White, Red, Blne, Green, Orange, Violet, or Grey	1,6	2 4	2,-	28	3]-	3,4	4,-
Crinoline or Printed "Poison," "Lotion,"	- 2/-						
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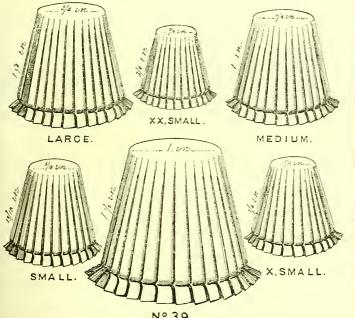
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Gross 1 3 4 3 9 4/- 4/3 4/6 48 49 410 Gross.

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45.	For	Winchester	Quarts					13	Ţ
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49.	39	92	2.2	9.3				2	15
51.	77	31	• •	**	• •	• •	• •	21	11

SOLD BY ALL DRUGGISTS' SUNDRIESMEN.

Manufactory-

3, 4, & 5 LITTLE WINDMILL STREET, LONDON, W.

Those who have not seen these can have no idea of the improvement in the "costume" of a bottle of medicine effected by them. A couple of sizes suffice for all the ordinary medicine bottles, and they can be supplied with the name printed on the centre.—Chemist and Druggist, February 15, 1878.

There is perhaps a great deal more in the way in which a bottle of medicine is sent out than is generally supposed. We happen to know a pharmacist who began business in a very small way, but became the leading chemist of the neighbourhood, and who attributed his success in a great measure to the very careful attention given to writing the label, capping the bottle, and folding up and addressing the package. His rule was to use only the best bottles, corks, string, and paper -which he said anyone could form an opinion of and if these were carefully directed and put up, the inference they would draw from it was, that the contents of the bottle were also carefully pre-pared; hence confidence was secured, and the business prospered. Such a pharmacist would fully appreciate the neat and convenient Pleated Bottle Caps introduced by Messrs. Hunt & Co., which, as well as doing away with all trimming, give a finish to the bottle, which cannot be compared with the old method. - Mather's Price Current, March, 1878.

The neat "capping" of medicine bottles is a point which the pharmacist and dispenser cannot well affort to neglect. and Messrs. W. F. Hunt & Co. have certainly made a successful bid for their suffrages in bringing out some beautifully-made Bottle Caps. These are of the best hand-made paper, and are turned out by machinery, pleated and with rims ready formed for tying round with twine. They are adapted for bottles of all sizes, and when applied have a better and neater appearance than the familiar leather caps, than which they are I kewise less porons, while as strong as need be for the purpose. By patronising these little contrivances the dispensing chemist may save both time and trouble.—British Trade Journal, April, 1876.

The accuracy of the pleating, beauty of coloring, handsome form, and their generally tidy appearance, together with their low price, will not fail to recommend them to every pharmacist who takes an interest in having his work appear well. Those who put caps on to their bottles at all, will find the use of these a great saving of time and trouble, and the result will be far superior to anything they can turn out by hand.—Yen Remedies, June, 1878.

These Bottle Caps are made of a very strong and non-porous paper, and we think are destined to entirely replace the ordinary method of Capping Bottles, whether they be of Medicine, Perfinmes, or anything else.—Perfumers' and Hairdressers' Gazette, May. 1878.

Medicine Bottles are not very cheerful ornaments for the toilet table; but if their presence is necessary, it is certainly desirable that they should be as attractive in appearance as possible. Some such idea must have been present to the mind of W. F. Hunt & Co. when they designed the elegant "Patent Bottle Caps," which are now so rapidly becoming popular with dispensers. These capsules are as easily put on and taken off as one's hat, and one of them is as much an ornament to a nauseous draught as a chapeau is to the doctor who prescribes the potion.—Figaro, May 17, 1876.

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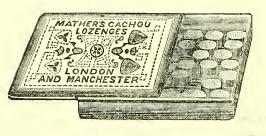
THE BEST, CHEAPEST, AND MOST SALEABLE NOVELTY OF THE YEAR.

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PATENT METAL SLIDE BOXES.

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Special Quotations on application for Large Buyers and for Export.

A Customer writes: "I must congratulate you on sending out the neatest and cheapest pennyworth I ever saw. Send me two gross more of your Cachous; though only opened late last night, nearly the whole of the box sent have been disposed of."

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May 15, 1879.

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All Advertisements intended for insertion in the current Month must be sent to the Publisher of the CHEMIST AND DRUGGIST on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 a.m. on the morning previous to publication.

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BOURNE & TAYLOR,

Vholesale and Export Druggists' Sundriesmen, CASTLE STREET, HOLBORN, LONDON, E.C.



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3/6 Fig. 1.—Upright Green Glass, with Wood Top Cork ... per doz. " 2.—Bent Neck Green Glass, with Wood Top Cork or Porcelain Cap ... 3/6 Ditto, ditto, Flint Glass 3/9 As Fig. 2, Shilling size, best Flint Bottle, with Tube and Bottle Brushes, Regulator,

&c.... per doz. Any of the above with Black or Brown Fittings, at 6/ per gross extra.

Special Quotations for 12 doz. 6d., or 6 doz. 1/.



Fig. 2.

NEXHAUSTIBLE SMELLING-BOTTLE.



Very saleable. Per doz., 7/6.

WATCH-SHAPE **SMELLING** BOTTLES

In great variety. Plain Cut, per doz, 6/ and 7/.

Rich Cut, per doz., 12/, 14/, 16/, & 20/. Rich Cut, Silver Capped, per doz.,

30/ and 48/. N.B.—A Special Cheap Rich Cut Watch, per doz., 7/ and 8/.

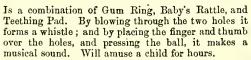
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Give a better light and burn longer than any others yet introduced. Mothers will find them very useful in keeping warm the Infants' Food as long as required. They are invaluable for the sick-room, as they give no smell, and are perfectly safe and economical.



Boxes, 4/ and 8/ per doz. Glasses for burning the Oil, 7/ per doz.

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One dozen on a Show Card. Per dozen, 4/.



HIGGINSON'S ENEMAS.

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... per doz. 32/ Green Rubber, with Disconnecting Mount ... p. 35/ The Perfect Enema, with Screw Pipes (Disconnecting) ... per doz. 37/ 48/ Special Quotations for Large Orders.



Fig. 1. Per doz., 18/.

B. & T.'s PERFUME SPRAY PRODUCER

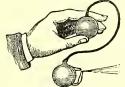


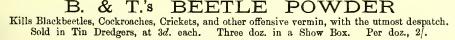
Fig. 2. Per doz., 20/.

Fig. 4. Per doz., 27/. B. & T.'S SPRAY PRODUCER FOR

is the simplest and best apparatus for perfuming apartments, end for disinfecting sick-rooms by means of Carbolic Acid, &c. It is also used for the destruction of Insects on Rose and Fruit Trees, &c. It is made in two forms:-one as Fig. 1, with

THE THROAT Is made similar to Perfume Sprays, and can be used for the same purpose. It has a long Glass Tabe for the mouth. These are highly recommended for Throat Diseases by the most

an Indiarubber Ball attached to the glass vessel, and the other as Fig. 2, with Indiarubber Ball and long Tube. 2/6 each. eminent Physicians. 3/6 each.







Destroys Flies, Fleas, Bugs, Moths, and all other offensive and destructive insects which vex and annoy both peer and peasant. In Bottles, at 6d. and 1/ each; also in Bottles with Perforated Tops, for convenient application, price 6d.; and in Tin Apparatus, with Piston Blower and long Tube, for crevices in walls and bedsteads, and other haunts of insects, price 1/. Price per doz., 4/ and 8/.



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BEST STOPPERED BOTTLES (all kinds), ½ oz. to 1s. Feeding Bottle, one in a box, with brush, &c., complete, 50s. gross. BEST QUALITY GREEN FLINT DISPENSING BOTTLES, Vial Lips, Flat or Oval, 3-oz. & 4-oz., 8s. 6d.; 10-oz. & 12-oz., 14s. per gross. Gasogenes, first-class article, 3-pint, 12s. 6d.; and 5-pint, 15s.

GLASS SYRINGES, BEST QUALITY 14/- 18/- 27/- 49/- per gross, All and every kind of Bottle made. Special prices given for any particular pattern. N.B.—All goods are sold in bulk. Special quotations to large buyers.

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\$\frac{3}{6}\$ 4/- 4/6 5/6 6/6 7/6 9/6 11/6 14/- 16/- 19/- 21/- grs.

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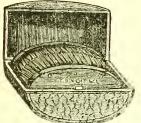
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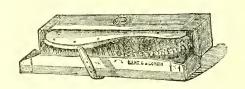
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Cases only to contain one pair of Military
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KENT'S TOOTH BRUSHES

Are manufactured at their Factory at Victoria Park, expressly set apart for this one description of Brush.



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SHAVING BRUSHES.

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Bent Back Roached Grooved 4/0 7/0 8/6 4/0 7/0 8/6 19/0 24/0 28/0



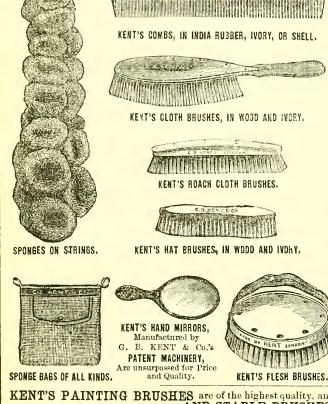
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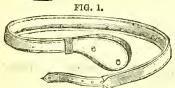
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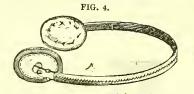
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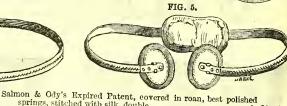


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Salmon & Ody's Expired Patent, single, Fig. 4		14	0
Salmon & Ody's Expired Patent, single, Fig. 4		10	ŏ
Moo Main Lover givels ", double, Fig. 5		0	ő
Moo-Main Lever, single		8	0
a gouble		13	6
Coles a Expired Patent, single		5	6
double			
Serotal Trusses, basil and chamois or moleskin single		10	6
" " double		4	0
,,,	0	7	0
SUPERIOR TRUSSES.			
Circular Trusses, narrow springs covered in begit and it			
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	1 2	7	0
Official Trusses, covered in red roan and chamoic single		2	0
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best quality, beautifully finished, single each			
Ditto ditto ditto double each double	0	5	0
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Salmon & Ody's Expired Patent, covered in roan, best polished springs, stitched with sik, single each			
eprings, stitched with sik, single each	0	4	0
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springs, stitched with silk, double each	£0	. 8	0
morning in the service of the servic		12	
			6
Scrotal Trusses, covered in moroeco or ealf and doe, single	0	17	0
belotat Trusses, covered in moroeco or ealf and doe, single	Λ	10	0
27 double			
	U	15	0
UMBILICAL TRUSSES.			
UMBILICAL TRUSSES, plain, in basil each			
each	0	7	6
n in red room			
on Salmon & Ody's principle in heat!"		10	6
ody's principle, in basil	0	9	6
	ā	12	6
Trusses for Prolapsus Ani et Uteri—Prolapsus Ani Truss			
Trotapsus Am Truss		1	0
" Uteri "	0	18	0
	·		•
W. H. BAILEY & SON'S SPECIALITIES.			
Improved Tours of Loral Ties.			
Improved Imperceptible Trusses, covered in morocco and silk, very			
strong and very light, entire weight under 3 ozs., single, each	_	_	
Ditto ditto ditto ditto	0	7	6
	0	15	0
improved imperceptible Circular Trusses in morocoo with all diagram			0
heads, single		_	
Ditto ditto each	0	7	6
	0	15	0
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is attached to the springs by hinges, which compensate for			
the movements of the last by linges, which compensate for			
the movements of the body. It is the only Umbilical Truss			
that can be worn with perfect case cach	1	2	•
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Is an Oily Liquid Preparation, entirely free from Acid.

Vill NOT INJURE the Leather; gives a PERMANENT POLISH of great brilliancy (ithout brushing), which does not rub off or soil the clothing; is Waterpoof; and through RAIN, SNOW, and MUD will last a Week.

I'd when dry may be brushed off with a stiff brush, or may be washed off, and the polish will remain the same.

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suitable for LADIES' and GENTLEMEN'S BOOTS and SHOES every description; also BELTS, PURSES, and TRAVELLING BAGS, HARNESS, MILITARY ACCOUTREMENTS, &c.

I sily applied with Sponge attached to the Cork, and should NOT be used more than once or twice a week.

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The quality of the New Oil is very choice, hoth as to flavour, colour, and its freedom from solid fats. We guarantee it absolutely pure. The extreme severity of the past winter has tested the "A 1" Oil for its winter-keeping properties—the result has been most gratifying; the Oil has given great satisfaction.

The Sale has been considerably larger than that of any former Year.

The Price for the New Oil is the same as that charged last year, viz :-

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Blotting-paper may be applied at the

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BEWLEY & DRAPER, Limited, DUBLIN.

See "CHEMIST AND DRUGGIST," December 15th, 1874.

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The advantage of this (the Original) preparation over the IMITATIONS of it consists in the ability to administer a sufficient dose of Phosphorus without the admixture of a large quantity of Cod-Liver Oil. Supplied in Bulk or Small Bottles.

PHOSPHORUS PILLS, 1-32nd of a grain, or any other strength required, non-resinous and perfectly soluble.

PANCREATIC EMULSION, or MEDICINAL FOOD, in Consumption and

Wasting, will always take precedence of Cod-Liver Oil by reason of its introducing the Stable Solid Fats into the System instead of the evanescent

No Oily Emulsions of any kind, not even Cod-Liver Oil itself, can supply the kind of fat necessary for sound and vigorous human life. In addition to this, all the Oily Emulsions are liable to rancidity, and most of them are highly objectionable in consequence of the Saponification, and ultimate Putrefaction, produced by the Chemical agents used instead of Puncreatine Juice, so that

PANCREATIC EMULSION, or MEDICINAL FOOD, is the most reliable form of nutriment for counteracting all tendencies to Phthisis and other Wasting Diseases. It presents to the Lacteals Fat in essentially the same condition for assimilation and absorption as in the vigorous human frame, and the agent of the important change is the natural secretion of the Pancreas.

PANCREATISED (Digestive) COD-LIVER OIL. By combining the Pancreatic Juice with the Oil, the digestion of the latter is easily and rapidly effected, the nausea prevented, and the beneficial properties of the Oil are increased.

PEPTODYN, for Indigestion, a Combination of the whole of the Digestive Secretions, Pepsine, Pancreatine, Diastase, or Ptyalin, etc., forming an invaluable remedy in the treatment of all forms of Dyspepsia and all diseases arising from imperfect nutrition.

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The Lord Chief Justice and Mr. Justice Mellor have given judgment in favour of the Pharmaceutical Society in the appeal case before them, in which the society sue the London and Provincial Supply Association (Limited), for penalties incurred for selling poisons. The defendants have given notice of appeal.

Vice-Chancellor Bacon's decision in the salicylic acid patent case (Von Heyden r. Neustadt), the evidence in which we summarised last month, was altogether in favour of the plaintiff. We have heard that there is a probability that the dispute will be carried to a higher court.

Another counter prescribing case was tried before the judge of the Birmingham County Court on May 13. The judge has reserved his decision.

It may be advisable to warn chemists and druggists again that the Weights and Measures Act of 1878 is now really in operation, and that every time they sell 8 oz. of anything as half-a-pint they are liable to a penalty. An active Inspector of Weights and Measures, named William Cook, has already secured the conviction of two chemists who sold him 8 oz. of quinine wine as half-a-pint, and in a third case the chemist only escaped because the inspector was unable to swear that he used the words "half-a-pint." In a case heard at Retford a shopkeeper was fined 11. for having a 3½ lb. weight in his possession, such weight being alleged to be illegal. But we surmise that there has been in this case a miscarriage of justice. The Weights and Measures Act (sec. 19) clearly

legalises the use of "multiples or parts" of the imperial weights and measures. The stone of 14 lbs, is one of the imperial weights of which the one in question is a quarter.

The Executive Committee of the Chemists and Druggists' Trade Association and the Council of the Pharmaceutical Society have issued their reports for the last year, some comments on which appear on page 200.

Mr. James Slipper, of Leather Lane, has been chosen by the Pharmaceutical Council to fill the vacancy caused by the resignation of Mr. J. M. Fairlie. We regret to hear that Mr. Slipper has since suffered a paralytic stroke, which will probably prevent the fulfilment of the duties of his office for some time.

On page 202 we print a small list of English proprietary medicines, the importation of which into France has recently been sanctioned on the payment of monstrous duties, amounting in several instances to the retail price of the articles.

The chemists of York have addressed a circular letter to patent medicine proprietors, asking them to take some steps to prevent the sale of patent medicines under advertised prices. The Sheffield chemists sent a similar letter sometime ago, and had a favourable reply from one firm only—Messrs. Kay Brothers, of Stockport.

We report (page 183) a short address by Mr. Joseph Ince to the students of the South London School of Pharmacy.

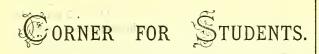
In a paper on Anæsthesia (page 187), Mr. A. H. Mason sketches the history of this interesting subject, and describes the special claims put forth for the various anæsthetics at present used.

On page 191 will be found in full Dr. B. W. Richardson's address on quackery to which we referred last month. The doctor deals with terrorist, homicidal, nostrum-mongering, specialist and protected quacks, and counter-prescribers, and proposes means of suppressing these.

Our medical contributor, M.R.C.S., commences, on page 196, a paper on the Diseases of Children.

An article which we quote from the Examiner shows a very exact appreciation of the danger incurred by the exemption of patent medicines from some of the provisions of the Pharmacy Act. In this connection, however, we may again point out that though poisonous patent medicines may be sold by anyone, they are not exempt from the 17th section of the Pharmacy Act. That is to say, the law strictly interpreted requires them to bear labels just as in the case of poisons otherwise sold to the public.

During the forthcoming week the following meetings will be held:—On Tuesday, May 20, at 12 noon for 12.30, the Annual General Meeting of the Chemists and Druggists' Trade Association, in the Banqueting Room of the Inns of Court Hotel, Holborn. This is open to all chemists and druggists. On Wednesday, May 21, at 17 Bloomsbury Square, the Annual Meeting of the Pharmaccutical Society. Open to members only. Notices have been given of motions by Mr. E. B. Vizer, against, and Mr. J. Wade, in favour of, the admission of ladies to membership. A Special General Meeting of the Society will be held after the annual meeting, to confirm an alteration in the bye-laws proposed by the Council. A Dinner of the members of the Pharmaceutical Society and friends will be held at Willis's Rooms, King Street, St. James's, on Tuesday evening, at 6.30; tickets, 30s. each, to be obtained of Mr. Richard Bremridge, 17 Bloomsbury Square. A Conversazione of the Pharmaceutical Society will be held at the South Kensington Museum, on Wednesday evening, May 21, commencing at 8 P.M.



CONDUCTED BY RICHARD J. Moss, F.C.S.

A MINERAL will again form the subject of an exercise in qualitative analysis. It is to be submitted to a systematic examination, such as will'reveal not only the essential constituents of the substance, but also any foreign matter that may be present as impurity. Students are to send in a full report of the analysis, to name the mineral, and point out the impurities it contains.

Students who wish to compete are requested to send their names and addresses before May 20. Sample of the mineral for analysis will be forwarded on May 26.

Students' reports will be received up to June 15.

DOLOMITE.

The subject of our last analysis was dolomite—a double carbonate of magnesium and calcium, containing as impurities, water, silica, iron (dyad and triad), traces of manganese, aluminium, and chlorine.

The name dolomitc is applied not only to the normal double carbonate, but also to various minerals containing the carbonate in other proportions. Some of these contain as little as 10 per cent. of magnesium carbonate. The two carbonates are isodimorphous, each of them crystallising in the trimetric as well as in the hexagonal system. It is therefore easy to understand how the mixed carbonate may occur in nature in very various proportions. Most carbonates are quickly decomposed by dilute hydrochloric acid even in the cold; dolomite, however, is only slowly acted upon by this re-agent, unless it is warmed, and even then the mineral must be finely powdered or it will take some time to be decomposed. Dolomite is the source of a large part of the magnesia of commerce. Various methods are employed to scparate the calcium carbonate; one of those in most frequent use is Pattinson's process, according to which the powdered mineral is first exposed to a low red heat, then treated under pressure with a solution of carbon dioxide in water, by which means magnesium is obtained in solution as an acid carbonate. The solution of acid carbonate deposits the normal carbonate on boiling. Dolomite is also employed as a source of magnesium sulphate, which is obtained by igniting the mineral, washing away the greater part of the lime, treating the residue with sulphuric acid, and finally separating the magnesium sulphate by crystallisation.

The ordinary methods for the detection of magnesium not unfrequently fail in the hands of the student, who does not always appreciate the importance of attending to the details of the operations. It must be remembered that magnesium is partly precipitated by ammonia, and that the portion which is not precipitated is retained in solution as a soluble double salt, and it is only when the solution contains enough of a salt of ammonium to form the double salt with the magnesium present that the latter is not thrown down by ammonia. For this reason mainly For this reason mainly ammonium chloride must be added to the solution under examination before ammonia is employed as a group reagent. It often happens that the liquid to be examined is highly acid, and, of course, much of the ammonia that is added goes to neutralise the acid and produce a salt of ammonium which answers all the purposes of the chloride, which need not then be added. When ammonium carbonate is employed as a group reagent it is equally necessary that the solution to which it is added should contain a salt of ammonium, or elsc magnesium will be partially precipitated as carbonate.

PRIZES.

The First Prize has been awarded to FRANK H. ALCOCK, 13 Woburn Place, Russell Square, W.C.

The Second Prize has been awarded to LIONEL STANS-WELL, 4 Elmore Street, No.

Marks Awarded for Analyses.

F. H. Alcock (1st	prize)							95
L. Stauswell (2nd	prize)	1.4						90
Inter Alias		••						85
Servus								85
W. Cyril Birks								83
Eniten								80
Cyprus								80
X. Y. Z.							••	80
Adonis								80
R. A. Cripps								78
Omega								75
D. H								70
J. Todd								70
Ferrum								65
J. P. Harold.							•••	30
T. G. Nicholson		••	• •	••	••	••		20
T. H. Elwin				• •	••	••	••	20
J. M. Wilson						••		15
F. T		••	••	••	••	••	••	10
F. J. Bankart		••	• •	••	••	•••		10
Iota	••	• •	••	• •	••	••	: •	5
0-1	••	••	••	••	• •	••	* *	5
B. P. Burn	• •	••	••	••	**	••	••	0
	••	• •	••	••	• •	• •	• •	0
Bat			• •	• •	• •	• •	• •	U

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

*** All Communications should include the names and addresses of the writers.

R. A. Cripps.—There is no such compound known as carbonate of the peroxide of iron. The ferric oxide in the mineral was probably derived from ferrous carbonate, which, by exposure to moist air—weathering, as it is technically called—parts with its carbon dioxide, and becomes oxidised to hydrated ferric oxide.

Omega.—Unless with the aid of the spectroscope, it is not easy to detect strontium in the presence of calcium by means of the flame colouration with any degree of certainty. The insolubility of strontium sulphate in a concentrated solution of ammonium sulphate distinguishes it and barium sulphate from the calcium salt which dissolves in this solution.

D. H.—Your evidence of the presence of aluminium was very incomplete, the "flocculent precipitate, tinged red," might not have contained any aluminium hydrate.

 $J.\ Todd.$ —Your examination did not include any test that would detect the manganese present.

J. P. Harold.—The condition iu] which iron is present is to be ascertained by an examination of the original solution. You appear to have tested that through which hydrogen monosulphide had been passed. This reagent reduces ferric compounds thus—Fe₂Cl₆ + H₂S = 2 FeCl₂ + HCl + S. This reaction accounts for the appearance of a slight whitish precipitate of sulphur, that you may recollect appeared when the gas was passed through the liquid. You ought to try a series of experiments on the detection and separation of magnesium in various mixtures which you can very easily prepare.

T. G. Nicholson.—It would appear that you omitted to add ammonia to the solution which you tested for magnesium; this would account for the imperfect precipitation. Magnesium phosphate is more soluble in water than ammonio magnesium phosphate, and the latter is three times more soluble in pure water than in water containing ammonia.

T. H. Elwin.—The crystalline nature of ammonio magnesium phosphate is sometimes not very evident when the precipitate is copious. You ought to have further examined the precipitate instead of reporting that magnesium might be present.

J. M. Wilson.—You appear to have neglected to employ ammonium chloride to keep the magnesium iu solution.

F. T.—You ought to study the reactions of magnesium not merely by reading about them, but by experimenting. For this purpose you should employ solutious containing various quantities of magnesium, calcium, &c.

Iola.—You will find it a great advantage to practise the analysis of mixtures of known composition; this, indeed, is the only way to become familiar with the various analytical reactions of substances.

Calcarius.—Your method of analysis is not a good one; it is better to precipitate Ba, Sr, Ca, as carbonates, in the filtrate from ammonium sulphide, filter, and examine the filtrate for magnesium and the alkalies.

B. P. Burn.—See remarks to "Iota."

Pharmacalia.

BARFF'S IRON-DISPUTED PRIORITY.

IE least observant will be conscious of that dual mental exence which all experience reveals—the one mental life inencing thought; the other, influencing action. It is hard understand this, but still more difficult to account for the nown fact of the duality of invention. Some great physicoremical truth remains for centuries dormant; usually it has en observed in an obscure manner, and even described guely. In a moment the truth comes out, clear as the day, d is at once so presented as to prove of direct and striking oplication; but, for the discovery of this long-buried truth ere are almost invariably two or more claimants. Faraday, ars ago, conceived it possible that the most refractory ases should be subject to condensation. A fair interval apsed before Pictet, a young man of Geneva, reported the ondensation of hydrogen and oxygen. At the very same me another investigator, led by judicious combination of neory with practice, reported his success in a precisely milar direction. Professor Bell displayed before an adience at the Institute of Civil Engineers his perfected strument which he called the "Telephone." He was met the reading of a paragraph from an old memoir which re a strong likeness to his own observations. We are either disputing nor discussing priority of invention, but will be conceded that if we are to deduce inferences from e literature of science, the mass of contributory informaon which is evolved by the publication of any valuable scovery seems to confirm the statement that there is nothing w under the sun.

Last month we gave a sketch of the paper read by Professor arff on "The Treatment of Iron to prevent Corrosion," ne point insisted on was that the protective oxidation hould be effected by the action of superheated steam alone, nd that there should be an entire absence of moisture or tmospheric air. The commercial advantages of a supply of on free from rust are obvious, and no praise can be too high r the ingenuity of the process. The subject, however, orms one more illustration of the plurality of the inventive lea. Mr. George Bower claims for himself an invention hich he conceived ten years ago, before a patent for the arff method was obtained. It consists in utilising the xygen of the atmosphere, instead of that contained in water. misunderstanding seems to have arisen between the two eventors which it is to be hoped may come to an amicable onclusion. The published letter of Mr. Bower tends to issipate the impression that the one friend had poached pon the conceptions of the other. Mr. Bower asserts that e is in a position to produce specimens of coating on cast ron which have stood the test of an exposure of two years -that the French Government have adopted the air process or the bronzing of the barrels of their rifles, and that the bsolute cost of the treatment of iron goods would not exeed 21. sterling per ton.

PLATINUM COATING.

The room at the Society of Arts had barely time to cool when hemembers who, on a certain Wednesday, had listened to one heory upon the non-corrosion of iron assembled on the next evening, Thursday, to hear the platinum-coating process of Mons. Dodé. Objecting to electroplating for reasons given, he French metallurgist uses two processes in the case of ron. First, either by means of a brush or bath, articles are coated with a composition consisting of borate of lead, oxide of copper, and spirit of turpentine. Heated in a furnace to from 500° to 700° Fahr., fusion of the metallic pigment is

effected, and it enters into the porcs of the iron and becomes homogeneously adherent. This inoxidation method supersedes galvanising, and may be produced in several hues of dark colour.

Secondly, a pigment is used composed of borate of lead, litharge, and essence of lavender. Its object is to supersede enamels, which may thus be produced in many coloured varieties. To either of these two processes of inoxidation and enamelling a coating of platinum may be applied; in the first case the platinum yields the appearance of dull silver, in the second that of highly-burnished metal. Dry chloride of platinum is dissolved in ether, and held in solution by essential oils; the solution is applied by a brush or bath, a heat not exceeding from 350° to 400° Fahr. being sufficient to cause the evaporation of the volatile medium in which the platinum is suspended. The platinum thus becomes incorporated with the inoxidated surfaces. Gold may be substituted for platinum and treated in the same manner. Heat, therefore, replaces galvanism as a coating agent, and a great advance in the protection of iron with a special bearing on decorative art may be anticipated.

CHEMICAL NOMENCLATURE.

All must rejoice at any step taken in the direction of uniformity of chemical statement. It is desirable, both for students and advanced chemists, that some general system should be adopted. An effort has been made to ensure this result in the Instructions issued to the Abstractors of the Chemical Journal. It is doubtless owing, in part, to some previous knowledge of this arrangement that the abstracts have been not only excellent, but that they have made their appearance with more than ordinary regularity. The Council of the Chemical Society, through their editor, Mr. Henry Watts, have issued the first part of a notice, which may be consulted, in extenso, in the pages of their journal. Before writing an abstract, the whole of an original paper is to be read through in order to judge as to the scale on which it should be made; it should be as concise as may be consistent with a clear and accurate statement of the author's results or theories, and, in the main, should consist of the expression, in the author's own words, of the substance of the paper. A true abstract should reflect the individuality of the writer. Note should be taken of other abstracts bearing upon the same subject; important references to the researches of others quoted by an author should be used. Statements, either practically identical with or opposed to those in the paper abstracted, should be included by the abstractor, and their agreement or contra-As a rule, methods of prcdiction noticed in a foot-note. paration or analysis should be omitted unless such details are essential. Equations, as a rule, are recommended not to be written upon a separate line, but should be "run on" with the text, an instruction we should be sorry to see introduced in any chemical text-book, much as it may suit the convenience of a monthly periodical.

Readers, teachers, and students would gladly hail the unanimous adoption on the part of chemists of one system of nomenclature and chemical formulæ. Many have already in practice agreed upon the following recommendations:—
"Employ names such as sodium chloride, potassium sulphate, ethyl acetate, and use the terminals ous and ic only in distinguishing compounds of different orders derived from the same elementary radicle, e.g. mercurous and mercuric chloride, sulphurous and sulphuric acid. Apply the term acid only to compounds of hydrogen with negative radicles, such as HNO₃, H₂SO₄, H₃PO₄, and denote the oxides which form acids by names such as sulphuric anhydride or sulphur trioxide. Term salts containing an amount of metal equiva-

Mil.

ni in

lent to the displaceable hydrogen of the acid normal, and not neutral salts, and assign names such as hydrogen-disodium phosphate, &c., to the acid salts." The judicious employment of shortened symbols is advised: thus, Me for CH₃; Et for C₂H₃, and so with many recognised contractions. Such contractions as have by common consent been agreed upon may obviously be used with advantage, and formulæ should be written in one line whenever this can be done without obscuring their meaning. Mr. Watts, speaking in the name of the Council, enters into further details of agreement, which will tend to render the chemistry of the hydrocarbons far less perplexing. Lesser chemists may be pardoned for understanding with difficulty those variations of nomenclature which have confessedly troubled even Dumas.

BOTANICAL TEACHING.

On Saturday morning, at the early hour of eight o'clock in the morning, Professor Bentley gave his opening demonstration of practical botany at the gardens of the Regent's Park. The flowers were peacefully reposing in their beds, while a number of between 40 and 50 students had contentedly left theirs to study nature from her own pages. The lecture, or rather explanatory discourse, was given in the Professor's usual lucid manner, and we doubt whether a better or more thorough knowledge of the subject can be gained than by attending these admirable expositions. Spring, said the lecturer, had appeared late this year, and sunshine must be sought rather in the intellectual than in the physical world; yet, botanically, this was no disadvantage, as many flowers could be studied which at this season had generally had their day. A good acquaintance with the parts of plants was essential before any classification could be attempted. This had been the design of the previous course, and now the direct practical application of booklearning was to be begun. Plants had various organs, such as the stem, the root, and leaf-the last was a typical organ, and demanded the closest and most accurate attention. It consisted of two parts—a soft portion or parenchyma, and a fibro-vascular tissue. Nodes, internodes, and terms such as base, apex, margin-upper and downward surface-buds, axillary, extra- and supra-axillary were described; and the varieties of leaf were mentioned as they existed in different classes of plants. The great distinctive classes of Monocotyledons, Dicotyledons, and Acotyledons were pointed out, the last being reproduced by spores, which were homologous organs to the seed. In the spore there was no true embryo, and hence no cotyledons. Of other terms we need not speak, as the Professor followed closely the order as arranged in his own "Manual," and the students will soon have to enter upon the mysteries of ramal, cauline, and seed leaves, bracts or floral leaves, leaves primordial and radical so called. It is evident from this mere outline of the introductory lecture, how difficult, uninteresting, and hopeless is botany, unless learnt from the actual teaching of the plants and flowers themselves. Here, in these lovely gardens of the Regent's Park, the student is invited to wander before and after the demonstration, and make his own observations. A glance will often do more than an hour of unassisted reading; and, with such advantages as those now offered, it is to be hoped that Pharmacy will long boast of a race of well-trained and competent botanists.

Business Notions.—A gentleman recently about to pay ins doctor's bill said, "Well, doctor, as my little boy gave the measles to all my neighbours' children, and as they were attended by you, I think you can afford, at the very least, to deduct 10 per cent. from the account of my bill for the increase of business we gave you."

The Pharmaceutical Council.

THE Council met on May 7. All were present except the Vice-President (Mr. Savage), Messrs. Mackay and Fairlie.

Before commencing business Mr. Hanbury explained that his reason for declining to accept nomination again on the Council was his inability to devote the necessary time. He desired to express the pleasure which intercourse with his brethren on the Council had given him. He feared the depression in time would bring trying times; but he trusted the Council would continue to maintain the dignified position which it had hitherto sought to hold; and while losing no legitimate opportunity of promoting the interests of the trade would show sufficient self-control to check undue activity. Perhaps the Council had been too conservative sometimes, but he believed their conduct had been in the true interests of those whom they represented.

The President expressed the regret of the Council that Mr. Hanbury had resigned the seat which he had filled so usefully.

PROFESSOR BENTLEY'S LECTURE.

On the motion of the President a cordial vote of thanks was passed to Professor Bentley for his admirable lecture on "The Life of a Plant."

NEW MEMBER OF COUNCIL.

A letter was read from Mr. Fairlie, dated Glasgow, April 15, resigning his seat on the Council. On the motion of Mr. Hampson, seconded by Mr. Sandford, Mr. James Slipper, pharmaceutical chemist, Leather Lane, was elected in his place.

HONORARY MEMBERS.

Dr. John Tyndall, F.R.S., and Dr. Julius Oswald Hesse, of Stuttgart, were elected honorary and corresponding members.

ADDITION TO REGISTER.

The name of Robert Roberts, King Street, Norwich, was added to the Register, he having satisfied the prescribed conditions.

THE ANNUAL REPORT.

After some verbal alterations had been made in it, it was passed.

THE ALTERATIONS IN BYE-LAWS

Agreed upon last month were read a second time.

THE BENEVOLENT FUND.

Sundry votes of assistance recommended by the committee were passed. Mr. Robbins returned the 30 guineas which had been granted by the council to obtain the admission of an orphan child into the Freemasons' School for Girls. He had secured the election by votes given freely. He mentioned that Mr. W. L. Bird had sent him 41 votes, Mr. Commans, of Bath, 38 votes, Mr. Bingham, of Eton, 35 votes, and that other gentlemen had greatly assisted him. One case had been before the committee in which the applicant was carrying on a small business, and no recommendation had been made. Mr. Sandford moved and Mr. Hampson seconded a grant of 10%. This was carried by 9 votes to 4, the rest not voting.

LEGAL MATTERS.

A letter had been received from the President of the Institute of Chemistry, suggesting that the use of the term "chemist" by persons who practised chemistry apart from pharmacy might be made legal by altering some of the sections of the Pharmacy Act in any amendment of that Act. It was resolved that the request should be acceded to when opportunity occurred.

A draft of the Bill to amend the Pharmacy Act, drawn by

the solicitor, was submitted.

A correspondence had taken place with Mr. Breary, Douglas, Isle of Man, with regard to the extension of the Pharmacy Act to that island.

The solicitor had reported that he had received notice of

peal from the solicitors of the London and Provincial ipply Association, and he had been authorised to retain e same counsel as had been engaged for the trial in the burt of Queen's Bench.

THE CONVERSAZIONE.

The refreshment contractor at South Kensington had deined to open the refreshment rooms on the occasion of the pressazione, because in the past two years there had been ome objection on the part of visitors to pay for refreshments. The President had had an interview with Sir P. unliffe Owen on the subject, the result of which was that he rooms would be opened.

Metropolitan Reports.

PROSECUTION UNDER THE WEIGHTS AND MEASURES CT.—On April 17, at the Richmond Petty Sessions, Henry loyd, chemist, was fined 1s, and costs for selling as half a int a bottle of quinine wine centaining only 8 oz. W. ook, inspector of weights and measures proved the sale. Ir. Lloyd, in defence, said that chemists had been accuspmed to sell by pounds and ounces and not by any tenomination of weight measure. The wine was sold as a bottle and not as half a pint. Mr. Thomas Hopwood was ummoned for a similar offence, but as it was doubtful if he words "half a pint" had been used by the purchaser the ase was dismissed. The defendant's costs were, however, efused.

SUICIDE OF AN ASSISTANT.—An inquiry into the death of fohn M'Intosh, aged 26, assistant to Mr. Squire, of 277 Oxford Street, druggist to the Qneen, was held on saturday, April 12. For many months past the deceased had been in depressed spirits, and fancied he should not live. On April 7 groans were heard from the deceased's bedroom; the door was forced, and the deceased found quite insensible, lying on the bed. A bottle containing prussic acid was found on the table. Beneath the bottle a scrap of caper was found, with the words, "Communicate with Hngh Macdonald, of 4 Vine Street," in the haudwriting of the deceased. Aftersome slight deliberation the jury returned a verdict of temporary insanity.

SUPPOSED FRAUDS.—Edward Glover, middle-aged, describing himself as a chemist, was charged at Worship Street, on April 17, with having obtained a suite of furniture, value 15%. 15%., by fraudulent representations. There were other charges against him. Glover had ordered the furniture of a dealer in Mare Street, Hackney, stating that he was a member of the firm of Glover & Co., chemists, Goodge Street, Tottenham Court Road. When the furniture was delivered Glover endeavoured to avoid receiving it, but finally did so, and shortly after pawned it for 71. Inquiries showed that he had no connection with the firm mentioned. Three similar cases were investigated, and the prisoner was committed for trial. The case was tried at the Middlesex Sessions on April 25, the indictment being for obtaining credit on false pretences with intent to defraud. As, however, the goods were obtained on the promise of payment on delivery, so that no credit was given, Mr. Serjeant Cox ordered the prisoner to be acquitted. At the Middlesex Sessions on May 5 he was again tried on two similar counts, and was again ordered to be acquitted.

SOUTH LONDON SCHOOL OF PHARMACY.

O'N Saturday, May 3, the prizes for the session were distributed at the South London School of Pharmacy at Kennington. The audience was overflowing, counting amongst the visitors several of the medical profession and representatives of pharmacy. Many ladies were present, and the students, who were in their most hilarious mood, beguiled the tedium of waiting by executing some vocal harmony of their own arrangement.

The chair was taken by the Rev. S. B. Harris, and the secretary, Mr. Baxter, reported the progress of the school, and gave the several awards. Before so doing he paid a high tribute of respect both to Dr. Muter for his successful endeavours, and to the various teachers for their zeal and assiduity. He advocated strongly the system of a written examination, and hoped the day would come when the oral or viva voce would be discontinued

He congratulated the students on the public interest that was taken in their work, as evinced by the numerous and influential gathering then assembled; and he passed a special eulogy on the value of practical pharmacy and dis-

SENIOR CHEMISTRY.

pensing.

Mr. Newbigin Medal. | Mr. Lenmon .. Certificate. JUNIOR CHEMISTRY. Mr. L. R. Scammell .. Medal. | Mr. Stevens.. .. Certificate. BOTANY. .. Medal. | Mr. Dutton.. Mr. Betts.. .. Certificate. MATERIA MEDICA. .. Medal. | Mr. Stedman Mr. Cook Certificate. PRACTICAL PHARMACY AND DISPENSING. Mr. Stevens .. Medal. | Mr. Cook Certificate. EXTRA CERTIFICATES OF MERIT.

Messrs, Lord, Exley, Forster, Langford, S. Powell, J. Powell, Holmes, Crook, Remiry, and Foale.

W. Baxter, Secretary.

Mr. Joseph Ince, the visiting examiner, then spoke as follows:—

"It is rather difficult for one who has had the pleasure of addressing you now so often to find acceptable words to say; any observations expressive of either congratulation or advice must be of a somewhat stereotyped character. I am glad, however, to see this morning that there is one subject left unchanged, and that it is likely to suffer no variation; and in the presence of this large audience I may honestly allude to the continued prosperity of the school. Some of you will be called in after life to be enrolled in what are termed the learned societies; it may be as well to anticipate that the mode of entrauce is by means of a certificate signed either from personal knowledge or from general acquaintance. In both ways I can answer for the prosperity of Sonth Kennington. I would gnard especially iu speaking on one particular subject from seeming to detract by inference from the credit due to the continued aud excellent exertions of Dr. Mnter as regards the study of chemistry. But having made that gentleman the fullest acknowledgment, I am at liberty to praise that department of Practical Pharmacy which, as examiner, has fallen under my notice; and judging both from the written papers, from the nature of the dispensing, and from the exceptional power that has been shown in the recognition of pharmaccutical specimens, it is but fair to say that the doctor has been seconded in his endeavours by admirable assistants.

I wish now to talk for a few minutes about the nature and position of your studies at the present time, limiting my remarks to the work immediately before you: the further and higher developments of study are a totally different branch of inquiry. Your first great duty is the accumulation of fundamental and primary facts; the way in which these facts are accumulated will form the basis of your after success. It is for you to utilise the teaching of this school to the utmost—by attendance on its lectures; by practical work and by private reading; and thus to lay up a large storage of this indispensable class of knowledge. For instance, the gaseous metal hydrogen, oxygen, and nitrogen possess certain physical and chemical characters. These gases unite to form compounds, and these compounds in turn form still other combinations.

All this kind of fact has to be learnt: it cannot be evolved from your inner consciousness or your imagination: it can only be systematically acquired. I am not unaware that these fundamental facts lead to splendid developments. I am not ignoring the wonderful researches that have been made, especially of late, into the region of organic chemistry so called. So great have been the discoveries that the boundary line which was supposed to separate the organic

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from the inorganie world is being rapidly effaced. Still less do I forget the practical applications of chemico-physical investigation which are the glory of our inventive age. But, I repeat, that your first present duty is to concentrate your attention at this moment on the hard study of those facts which lie at the basis of all development. It is not for you just now to speculate and philosophise. There is a time and place for everything. Carpe diem, not Carpe dies, is the old Latin adage, and you will find ample occupation in laying the groundwork of your knowledge. There is seed-time and there is harvest, and no conceivable legerdemain can eram the two operations into one. While witnessing the distribution of the prizes I have been reminded that there is a second object before you: one that springs from working in company. In this school you cannot accumulate faces alone—many are running together the same course, and thus there springs up from necessity a spirit of emulation, a generous rivalry which is in itself a good thing. You will find, many of you—it is clear—have found, that work is associated with honour.

I come now to my last and most difficult topic. The majority amongst you have accepted pharmacy as your vocation, and as a means of gaining an honourable livelihood. The Government under which we live, following the example of other countries, has enacted that no man shall practise pharmacy without being duly qualified by means of an examination. This is a matter the advantage or disadvantage of which we have not to discuss. As regards yourselves there is no room for argument, for such examination is compulsory. Am I then as an adviser to say that you are to banish the thought from your minds? I abandon such an impossibility, and I accept the situation as it stands. Let us take a sensible view of things that are, and let me urge you so to conduct your studies, faithfully and energetically, as to be prepared to face that ordeal which the Legislature has imposed. I would warn you against idealism, and against being led away by indefinite notions of adopting a higher standard or of taking a broader view. Knowledge in the abstract should be cultivated for its own sake, but everything in its proper season—labour at the foundation now, and leave refinements to hereafter.

I once heard the late Dean Alford say, when speaking on the same topic, though not with reference to systematic training, "How foolish it is to expect the ripeness and the bloom of autumn when we should naturally expect but the freshness and the promise of the spring!" I deprecate altogether quoting the sacred writ in a theological sense in support of a general argument, but we may appeal to its pages as the grandest exposition of philosophy. I would refer you to that Hebrew psalm where the whole thought which I have endeavoured to convey is summed up in a sublime manner. I allude to the description of the blessed man, of whom it is said—"And he shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season; his leaf also shall not wither; and whatsoever he doeth shall prosper."

The chairman having briefly addressed the students, the meeting was at an end.

Probincial Reports.

BARTON (LINCOLNSHIRE).

PHARMACY ACT PROSECUTIONS.—At the Barton Petty Sessions on April 28, George Henry Smith, of Barton, ehemist, for unlawfully selling to police-constable Jacob Cobb, on April 14, a packet of Battle's vermin killer, was fined 5s. and 9s. 6d. costs; and Richard Fox Smith, of Barton, ehemist, and Joseph Bently, of Barrow, ehemist, for similar offences, were fined 5s. and 9s. 6d. costs.

DUBLIN.

DEATH OF A DRUGGIST UNDER SUSPICIOUS CIRCUMSTANCES.—A very painful occurrence came under the notice of the Coroner on May 6. It appeared that Mr. John Joseph O'Brien, a druggist in the employment of Mcssrs. Wood, Webb, & Phenis, Temple Lane, was found on Saturday night

a little before midnight on the footpath, within about 5 minutes' walk of his own residence at Sandymount, in an apparently dying condition. The constable who found him conveyed him to a hospital within 15 minutes, and every attention was given him, but he died between 7 and 8 on Sunday morning. The deceased was apparently in good health, was a total abstainer, and had spent the evening in company with a friend at the Royal Hotel, having taken nothing but about half a bottle of lemonade. There seemed little doubt that he had died of apoplexy, but it was stated that when he left home in the morning he had a 10t. note, a gold watch and chain, ring and pin, none of which articles were about him when found. Mr. O'Brien will be remembered by Irish chemists through having aeted as assistant-secretary to the Irish Chemists and Druggists' Society. He leaves a widow and four children.

EDMONTON.

CHARGE OF LIBEL.—On April 21 at the Edmonton Courthouse, Edward Mills, commercial traveller, of 1 Lambeth Terrace, New Southgate, was charged with publishing a false and malicious libel on the 10th ult. concerning Silvester Fulda. The prosecutor, a chemist at Bow, had registered a number of patents, among which was an improved composi-tion for the preservation of meat, poultry, &c., and hardening and bleaching lard, and the defendant was engaged as one of the proseentor's travellers for the sale of this article, at a salary and expenses; but some time in March the defendant was discharged. Early in April another traveller, named Hoare, who was doing business for prosecutor at Manchester, wrote to the defendant to the effect that as he had heard various statements as to the worthlessness of prosecutor's patents, he should like defendant to state a few facts respecting him. Defendant thereupon sent the letter containing the libel, in which he stated that he had no hesitation in saying that Hoare was working for a big swindler, and that if he had any regard for his name he would leave Fulda at once; and in another part of the letter he spoke of prosecutor as a thief, and the biggest rogue that ever lived. This letter defendant placed in an open envelope, and enclosed in a letter to a pork-butcher at Manchester, with a request that he would read it before giving it to Hoare. The Bench determined to commit the defendant for trial at the Middlesex Sessions, bail being accepted.

EXETER.

Fraud on a Chemist.—On April 26 Montague D'Oyley Fullerton Armstrong, alias J. D. Arbuthnott, was sentenced to 12 months' imprisonment for forgery and for obtaining money by false pretences. He had been residing at the fishing village of Mevagissy during the first quarter of the year. Mr. James Kemble, chemist, of that place, had supplied him with various articles, for which he paid cash. On March 18 he owed 18s., and brought a cheque for 12l., asking Mr. Kemble to cash it. It was signed J. D. Arbuthnott, and was returned from the bankers marked "no account." The prisoner had left the place, but was apprehended at Exeter, and was sentenced as above at the Devon and Cornwall Assizes.

JERSEY.

CHEMISTS AND THE MILITIA.—The military authorities of the island and the civilians appear unable just now to arrange their duties in a mutually satisfactory manner. Some local indignation has been the result of a dispute between an officer at St. Heliers and Mr. J. T. Baker, a chemist of that place. The latter being ordered to attend at the arsenal for drill refused to obey, and was threatened with summary imprisonment. The officer, however, had sufficient sense not to attempt to carry out his absurdly illegal threat. Somebody told him, perhaps, that there is no law in this country permitting military officers to seize and incarcerate without proper trial, according to their own good pleasure, civilians who may offend them.

KINROSS-SHIRE.

FISH POISONED BY CREASOTE.—Mr. Napier, Inspector of Salmon Fisheries, has made a thorough investigation into the cause of the recent wholesale poisoning of trout in the River Devon. He finds that the contents of a tank contain-

ing creasote for dipping stoks had percolated through the ground into a drain, and thence to the river, and that the occurrence was accidental.

LIVERPOOL.

The Chemists' Association.—The concluding meeting of the session was held on May I, when a short paper on "Water" was read by Mr. Thomas Williams, F.C.S., and this was followed by a valedictory address from the president, Mr. S. F. Abraham, in which he epitomised the papers which had been read before the Society during the session then ending. The members next proceeded to the election of a president for the session 1879–80. Dr. Symes, Mr. E. Dares, F.C.S., and Mr. M. Conroy, F.C.S., were nominated; the two latter preferred not to stand, and the ballot resulted in the election of Dr. Symes by a large majority. His year of office will commence next October.

PORTSMOUTH.

SUICIDE.—A man took lodgings in this town on Tuesday the 6th inst., and the next day poisoned himself with cyanide of potassium. In his waistcoat pocket was a piece of paper, on which was written:—"My name is William Charles Vizer, tailor. My brother's name is Edward Bennett Vizer, chemist, at Cliftonville, Hove, near Brighton. No food since Sunday last; no sbirt." At the inquest, Mr. E. B. Vizer, chemist, Cliftonville, identified the body as that of his half-brother William Charles Vizer, who was about 60 years of age, and a tailor by occupation. Witness last saw the deceased at his house about two months ago. He was then in distress, and witness relieved him, as he had frequently done. For many years the deceased had been a trial to his family, but he had come into several sums of money at different times, and had squandered them. He had lived from place to place, and had exhansted the patience of his family. He did not know that the deceased was of a melancholy disposition, but he had had a great deal of trouble, chiefly brought upon himself. His health had been bad. Witness's associations with him were so brief that he could hardly state positively anything about him. Medical evidence was given to the effect that the body was well nourished. The jury found the evidence insufficient to determine the state of mind of deccased.

SOMERSETSHIRE.

THE YOUNG HIGHWAYMEN.—C. W. Cross and T. Hinks, the boys whose escapade we noticed last month, were sentenced at the Taunton Assizes, Cross to six months and 25 strokes of the birch rod, and Hinks to three months and 12 strokes.

ROTHERHAM.

BEATSON & MYCOCK.—On April 25, Mr. Justice Denman, sitting in banco in the Common Pleas Division of the High Court of Justice, delivered judgment in this ease which has been long before the Court. The circumstances have been often described in this journal. William Beatson induced Mycock to become a partner in his business of chemical manufacturer on January 1 only. The firm's only banking account was headed William Beatson, Esq. Subsequent to the partnership two bills addressed to Mr. William Beatson, Chemical Works, were discounted by the Yorkshire Banking Company and the Leeds County Bank, neither of which knew of Mycock's connection with the business. The deed of partnership forbade either partner to draw bills on the firm without the written consent of the other. Beatson's private account was always overdrawn, while there was always a balance in hand on the account of the Chemical Works, which was kept under the same heading. On the bankruptey of William Beatson the partnership was disclosed, and the two banks instituted proceedings to recover the amount of the bills. Beatson allowed judgment to go by default. Mycock denied his liability. At the first trial at Leeds Assizes before Mr. Justice Lindley the jury found William Beatson's acceptance must be taken as the acceptance of the firm. Mycock moved to set aside the verdiet on the grounds of misdirection by the judge, and that the verdict was against the weight of evidence. Mr. Justice Denman considered that the bills were clearly accommodation bills for Beatson's own benefit. There was nothing on the face of them to indicate that anyone but Beatson was to be bound. Judgment was therefore entered for the defendant Mycock, with costs.

SHEFFIELD.

AERATED WATER MANUFACTURERS.—The first annual meeting of the Sheffield and district aërated water mannfacturers was held at the Pack Horse Hotel on April 17, nnder the presidency of Mr. J. R. Wheatley. There was a nnmerous attendance. Speeches in favour of the objects of the society were delivered by Councillors Skinner and Alfred Jackson, Messrs. Ellis, chairman of the Licensed Vietnallers' Association; John Ward, secretary of the Wine and Beer Trade Association; Stringer, Foster, Webster, J. Ward (Castleford), May, Dawson, J. Uttley, and E. M. Adams, of London, editor of the Mineral Water Trade Recorder. Several gentlemen not immediately connected with the manufacture of mineral waters became honorary members of the association.

SALE OF DILUTED PAREGORIC.—At the Sheffield Town Hall on April 19, Robert Bennett, chemist, King Street, was summoned nnder the 7th Section of the Sale of Drngs Act, 1875, for selling a compound article or drug not composed of the ingredients in accordance with the demands of the purchaser.—The Town Clerk (Mr. J. Yeomans) appeared to prosecute.—Inspector Brammer, in February last, purchased from the defendant eight ounces of compound tineture of camphor, for which he paid 1s. 5d. He afterwards submitted a portion of it to Mr. A. H. Allen, the borough analyst.—Mr. Allen's report was to the effect that his analysis showed that the compound contained 34 per cent. of alcohol [corresponding to a mixture of 3 parts water with 2 parts rectified spirit.—ED. C. & D.], instead of 48 per cent. It also contained a mere trace of benzoic acid, and only a trace of oil of aniseed .- Dr. Hime, Medical Officer of Health, said that the absence of the proper proportion of ingredients would prevent the article from having the effect it should have.—Mr. Bennett said he was prepared to swear that the whole of the ingredients as required by the Pharmacopaia were in the compound in their proper proportions, with the exception of the spirit. Farriers required a weaker sort of spirit, which had been used by mistake. He had been in business all his life, and this was the first time he had infringed the Act.—A finc of 51, and costs was imposed.

THE annual meeting of the Sheffield Pharmaceutical and Chemical Association was held on April 23, the President, Mr. W. Ward, F.C.S., in the chair.

The Hon. Secretary, Mr. J. Turner, read his report for the past year. The patent medicine question had been one of the first to occupy attention. The Association had written to the principal proprietors, asking whether something could not be done to prevent their preparations being sold under regular prices. Messrs. Kay Brothers, of Stockport, were the only firm who had sent a favourable reply. They stated it was their intention to snpply only those parties who maintained the original price.

The Medical Acts Amendment Bill had been under their consideration. The borough and county members had been written to, asking them to amend the said Act in such a form that it would not interfere with the interests of counterprescribing, in which object they sympathised.

The British Pharmaceutical Conference had been invited to visit Sheffield next August, and it remained with the chemists of Sheffield to give them a cordial reception. The following had been elected officers of the forthcoming conference: -W. Ward, F.C.S., Vice-president; G. Ellinor, a member of Executive Committee; G. A. Cubley, Auditor; H. W. Maleham, Hon. Local Secretary.

The Shepperley prescribing case had several times been up for discussion, and this Association had granted the sum of 15l. out of its funds to the Trade Association for defraying its expenses.

Last year the Association numbered 50 members, now 46, showing a decrease of 4. There had been 11 meetings: six general, five council.

The President, in a valedictory address, referred to the work of the Association during the past year. He profoundly regretted that nothing had been done in the way of lectures in aid of pharmaceutical education. He had come to the

conclusion that until some means were devised compelling students to undergo a certain course of lectures, embracing all the subjects of the Minor examination, little would be effected by Associations such as theirs, and he should hail the time when such a curriculum would be made compulsory, as he considered a two years' course of lectures indispensable before a candidate should be permitted to present himself for examination. The Shepperley ease had excited much interest, and it was gratifying to know that this much-vexed question of counter-prescribing had been brought to such a satisfactory issue; he believed the day far distant ere another attempt would be made to interfere with a custom so long possessed. The Trade Association had, by its strenuous action, rendered inestimable service to the trade at large, and he would say all honour to the Executive Committee for their untiring efforts to defend the right. He should like to see something done to prevent the sale, by unqualified and ignorant persons, of proprietary articles which contained poisons within the meaning of the Pharmacy Act. There was another grievance which had not yet been grappled with, as far as he knew: the sale of homogopathic poisonous preparations. At the present time these were being sold by grocers and others without the slightest difficulty, and it did appear high time some definite standard was arrived at by which they might grasp the "infinitesimal," and declare for or against their sale by persons outside the pale of pharmacy. The members would rejoice with him on the splendid victory just gained by the Pharmaceutical Society against the London and Provincial Supply Association; a victory, in his opinion, morally and legally won. He heartily congratulated the Association on the honour about to be conferred upon their town by a visit from the British Pharmaceutical Conference in August next. There would probably be a numerous and brilliant gathering-Sheffield being one of the most central towns of the United Kingdom. He hoped every means would be adopted to ensure a perfect success.

The treasurer's accounts showed that the Association had

in hand 201. 18s. 5d. after paying all liabilities.

The following officers for the year were then appointed, viz.:—Mr. W. Ward, F.C.S., President; Messrs. G. Ellinor and J. S. Burnell, Vice-presidents; Mr. W. Jervis, Treasurer; Mr. J. Turner, Hon. Secretary; Messrs. J. T. Dobb and F. Hudson, Auditors; Messrs. G. A. Cubley, H. W. Malcham, H. E. Ibbitt, G. Carr, J. Otley, G. T. W. Newsholme, E. R. Learoyd, and J. Watts, Council.

Mr. J. F. Wilkinson, Manchester, had given a donation

of 11. 1s.

STAMFORD.

Poisoning by Battle's Vermin-killer.—On April 18 a young woman named Emma Wade gave her illegitimate child a dose of Battle's Vermin-killer and took some herself. The powder had been purchased from Mr. F. Dickinson, chemist, with all the usual formalities. The child died, but the mother recovered, and has since been found guilty of murder, though with a very strong recommendation to mercy. She is now respited.

usk.

SUICIDE.—On the night of March 28 Mr. Henry Edwards, son of the late Mr. John Edwards, chemist, of Usk, left his lodging, and, it was supposed, drowned himself. Nothing further was seen of him till April 21, when Mr. James, of Trestevan Faum, discovered the bedy under the bushes overhanging the river below Llangibby. An inquest was held on April 22, when a verdict "That deceased had destroyed himself whilst in a temporary fit of insanity" was returned.

WOLVERHAMPTON.

CLAIM FOR A BAD CHAIR.—Mr. G. A. Davenport, chemist, Chapel Ash, Wolverhampton, bought a nice-looking chair of Mr. Pearson, cabinet-maker, Dailington Street, for 15s. 6d. The chair broke the first time Mrs. Davenport sat in it with a baby in her arms. It was returned for repairs, but was kept so long that another was bought in its place; and on April 21 Mr. Davenport sned Mr. Pearson for the value of the chair. The judge thought it could not have been a good chair, and gave a verdict for the plaintiff for 12s. and costs.

YORK.

THE PATENT MEDICINE TRADE.—The annual meeting of the York Chemists' Association was held at the Society's rooms at the King's Arms Hotel on Wednesday evening, April 16, Mr. Councillor John Brown being in the chair.

The minutes and transactions of the past year were read over and confirmed, and the treasurer's accounts and balance sheet audited, showing a surplus of 3l. 19s. 11d. to be carried

to the credit of next year's account.

Mr. George Dennis, the president; Mr. Thomas Cooper, the treasurer, and Mr. Joseph Sowray, the hon. secretary, were re-appointed, and councillors J. Brown and C. Croskell, and Messrs. T. W. Wilson and E. B. Kendall were elected upon the executive committee.

upon the executive committee.

The annual dinner was arranged to take place on

April 30.

After the transaction of the usual business a discussion arose on the patent medicine and proprietary articles question, when the chairman proposed, and Mr. Saville seconded, that the following resolution and circular letter should be forwarded to the principal patent medicine proprietors, and that the same be also communicated to the Pharmaceutical Society, the editor of The Chemist and Druggist, and the Birmingham Trade Association, which was unanimously agreed to.

RESOLUTION.

Moved by the Chairman, Mr. Councillor Brown, seconded by Mr. Saville, and agreed to unanimously.

That in consideration of the injury inflicted upon the chemists and druggists throughout the country by grocers, co-operative stores, and others selling patent medicines and proprietary articles at less than the published price, it is hereby resolved that an endeavour be made to induce the proprietors of such medicines, &c., not to supply them to any traders except under a guarantee to sell at the advertised prices. Such guarantee to be either by ordinary signature or by a stamped hond, under a penalty, as each proprietor may require.

The circular letter to be sent to patent medicine proprietors was as follows:—

Sir,—I beg to draw your attention to a resolution agreed to at the Aunual Meeting of the York Chemists' Association, held on April 16, and hope you will give it your consideration, and adopt it or any other practical means, in order to check the evils complained of, and the consequent loss of profits and damage such proceedings entail upon the trade throughout the country.

For some years past, owing to the system of advertising now so commonly adopted, and the liberal supply of bills freely sent to the retailers, which are daily distributed over the counter, finding their way into every household, this particular description of trade has been much on the increase, and is constantly extending. The principal reason for such inerease being the large profit attending on the sale, and the consequent personal interest that thousands of respectable chemists have in its extension. Those influences have no doubt been of great mutual advantage to the proprietors and the trade, and it is only by the continuance of the same course of policy that those results can be ensured in the future. It is possible that a lowering of prices may have to the present time increased the sale for the benefit of the proprietors, but this cannot long continue when the trade have no interest in promoting and extending their sale in consequence of loss of profits from discreditable and dishonest competition. It appears to me that each chemist will endeavour to diminish their sale, and will recoup himself hyputting up his own specialties, and sell them in licu of those from which he is obtaining no advantage.

In recommending, therefore, the resolution of the York chemists, I think an end may be put to this unhealthy state of things by the proprietors of patent articles themselves, as all that is requisite is for them to adopt a form to be signed by both wholesale and retail chemists, pledging themselves to sell only at the published prices, and where necessary the agreement could be on a stamp, and a penalty named, which would be recoverable in a court of law for any infringement of the agreement, or if thought necessary, they could appoint agents in every town, from whom alone those medicines could be procured. If this plan could be universally adopted, the evils complained of would at once be remedied, and an end be put to that state of things which, if suffered to continue, will be the ruin of the trading community.

I shall feel glad if you will seriously consider this question, and let me know your opinion on the subject at an early date.

I am, sir, yours truly,

Joseph Sowray,

Hon. Secretary.

57 Petergate, York, April, 1879.

THE HISTORY OF ANÆSTHESIA, ANCIENT AND MODERN — THE NATURE AND POWER OF VARIOUS ANÆSTHETIC AGENTS AND THEIR APPLICATIONS, &c.

BY ALFRED H. MASON, F.C.S., &c.

(Read before the Liverpool Chemists' Association on April 17, 1879.)

A NÆSTHESIA is a term used in medicine to describe a state of insensibility to external impressions, either as the result of disease, or as induced artificially by the employment of certain substances known as anæsthetics.

The artificial induction of anaesthesia by the use of drugs or the inhalation of vapours is a subject of great interest, both historically, and from its practical application to the

relief of suffering and the treatment of diseases.

Anæsthesia may be produced: (1) By the inhalation of vapours or gases; (2) By mechanical means; (3) By the internal administration of drugs. Although it is mainly owing to the researches of distinguished chemists and physicians of the present century that the employment of anæsthesia has come to occupy a foremost place among remedies, there is abundant evidence to show that it is a practice of great antiquity.

Method 3.—In ancient days two substances were held in great repute by patients about to undergo surgical operations, and also by criminals condemned to suffer torture. These drugs were Indian hemp, Cannabis sativa, and mandragora, Atropa mandragora, but now called Mandragora officinalis. It will be of some interest, if not advantageous,

to eonsider an abstract history of these substances.

Indian Hemp.—Sir Joseph Banks alludes to the preparation and use of this drug in various parts of the world, from Mexico to China, in which countries it goes under the name of bang, churras, and gunjah. He mentions that when any preparation of this plant is swallowed, the mind is immediately filled by a delicious succession of pleasant ideas, which banish all cares and produce a perfect indifference to This state is, however, soon followed by sleep. The drug is more especially used by criminals doomed to suffer torture, and it seems to be what is taken by the Hindoo Suttee to give her powers of endurance. Some years ago an old Chinese manuscript was laid before the French Academy by M. Julien, in which the use of Indian hemp for annulling the pain in cauterisation and surgical operations is mentioned as having been had recourse to by a practitioner named Hoa-tho, about 1,500 years ago. In this manuseript, which is called Koukiu-i-ting, we find the following passage:—"He (Hoa-tho) gave to the patient a preparation of hemp (Ma-yo) and at the end of some instants he became so insensible as if he had been drunk, or deprived of life, after a certain number of days the patient found himself reestablished, without having experienced the slightest pain during the operation.

The effect of the iuhalation of the vapour of burning hemp is mentioned by Herodotus,* who tells us of its use by the Massagetæ and by the Scythiaus, to produce excitement. Thus, writing of the Massagetæ, he says "that they have discovered other trees that produce fruit of a peculiar kind, which the inhabitants, when they meet together in companies, and have lit a fire, throw on the fire as they sit down in a circle; and that, by inhaling the funes of the burning fruit that has been thrown on, they become intoxicated by the odour, just as the Greeks do by wine, and that the more fruit is thrown on the more intoxicated they become, until they rise up to dance, and betake themselves to singing."

Again,† when describing another tribe of the Scythians, he states that "they have a sort of hemp growing in the country very like flax, except in thickness and height"; and a little farther on he states that "when, therefore, the Scythians have taken some seed of this hemp, they creep under the cloths, and then put the seed on the red hot stones; but this being put on, smokes, and produces such a steam that no Greeian vapour-bath would surpass it. The Scythians, trans-

ported with the vapour, shout aloud; and this serves them instead of washing, for they never bathe the body in water."

Homer* also gives us an account of the effect on Ulysses and his companions of drinking some preparation, which he called "Nepenthe," and the pheuomena he describes are so like those produced by hemp that we may conclude it was of this substance they made use. He tells us that the Jove-desceuded Heleu planned other thiugs, and that she "straightway cast a drug into the wiue from whence they were drinking, that frees men from grief and from anger, and causes oblivion of all ills. Whoever should drink this down, when it is mixed in a cup, would not shed a tear down his cheeks for a whole day, not even if both his father and mother should dic, nor if they should slay with the steel a brother or a beloved son before him, and he should behold it with his eyes. Such cunning and excellent drugs the daughter of Jove possessed, which Polydamnia, the wife of Thon gave her, an Egyptiau."

Pliny also mentions this drug in his natural history.

Mandragora.—This plant was most extensively used by Hugo, of Lucca, in the twelfth century, and the preparation employed by him is described by his son and successor, Theodoric, who died in 1298, under the name of Spongia somniferu—that is, the somniferous ball, or spouge, or apple. In his "Chirurgial," ‡ which he published on entering the Church, and in which he made known most of the chemical preparations and rules of the art of surgery which had been followed by Hugo, who had, however, kept them all secret, we find the following prescription :- " Take of opium, of the juice of the unripe mulberry, of hyoscyamus, of the juice of hemlock, of the juice of the leaves of mandragora, of the juice of the wood-ivy, of the juice of the forest mulberry, of the seeds of the water-hemlock, each an ounce; mix all these in a brazen vessel, and then place in it a new spouge; let the whole boil as long as the sun lasts on the dog-days, until the sponge consumes it all, and it has boiled away in it.' He then goes on to describe the way in which the sponge is to be used. "As oft as there shall be need of it, place this sponge in hot water for an hour, and let it be applied to the nostrils of him who is to be operated on, until he has fallen asleep, and so let surgery be performed. This being finished, in order to awaken him, apply another sponge, dipped in vinegar, frequently to the nose, or throw the juice of the root of fenugreek into his nostrils; shortly he awakens."

There are many allusious made to the anæsthetic effect of

mandragora by ancient authors.

Dioscorides § says:—Some persons boil the root in wine down to a third part, and preserve the decoction, of which they administer a eyathus, in want of sleep and severe pains of any part, and also before operations with the knife, or the actual cautery, that they may not be felt.

Again, writing of another kind of mandragora, which he calls moriau, he says: They relate that a drachm of it being taken as a draught, or eaten in a eake or other food, causes an infatuation and takes away the use of reason. The person sleeps without seuse, in the attitude in which he ate it, for three or four hours afterwards. Medical meu also use it when they have resort to cutting or burning.

Pliny, speaking of mandragora, says: It has the power of

causing sleep to those who take it, &c.

The effects of this drug are also alluded to by Galen, ¶ who concludes by remarking that those who are thus affected quickly lose the sense and motion of the whole body.

Innumerable passages occur among modern authors, from which we learn that deep sleep was brought on by amesthetising draughts, but in most of these the composition is not stated.

Shakespeare, in the tragedy of "Romeo and Julet," ** says:—

Within the infant rind of this weak flower Poison hath residence, and med'cine power: For this, being smelt, with that cheers each part; Being tasted, slays all senses with the heart.

And in act iv., scene 1, he makes further allusion.

^{*} Homer, by Buckley, "Odyssey," iv., p. 219.
† Hist, Nat., xix., p. 36.
† Chirurgial, iv., p. 8.
§ Dioscorides, iv., 76.

| Hist. Nat., xxv., 94.
| Galen, vii., 207.
| Act ii., scene 3.

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Opium has been suggested at various times, but the dose required to produce anæsthesia would be so large that it could not be administered with safety.

Method 2.—By mechanical means.

In 1784 Dr. Moore proposed to bring about local anæsthesia of the limbs during surgical operations by compressing the nerves supplying them. This was accomplished by applying a tourniquet for an hour before the operation. Several others tried this method, but the result was only a partial success, for it was found that the instruments used to compress the nerves themselves produced considerable pain. It was supposed at one time that compression of the carotid arteries, and consequent diminution of the supply of blood to the brain, would be successful in producing anæsthesia; and several put this plan into practice in the sixteenth and seventeenth centuries. There is no doubt that it will induce stupor or coma, and that, moreover, with extreme rapidity. This is too frequently proved in cases of garrotting, of which an instance is recorded where stupor was successfully produced, and robbery committed between the time of the victim ringing his door-bell and the servant answering the summons.

Method 1.—By the inhalation of vapours or gases.

When, towards the close of the last century, the brilliant discoveries of Priestley gave impetus to chemical research, the properties of gases and vapours began to be more closely investigated, and the belief was then entertained that many of them would become of great medicinal value.

In 1795 Dr. Pearson proposed the inhalation of sulphuric ether (and he appears to have been the first to do so), but apparently only for the purpose of relieving cough in asthma, &c., and not for producing general anæsthesia.

In 1800 Sir H. Davy recommended the employment of nitrous oxide gas for the relief of pain in the extraction of

teeth, and other minor surgical operations.

In 1828 Dr. Hickman suggested the inhalation of carbonie acid, as a means of producing insensibility in surgical operations.

In 1839 Reynault suggested the use of bichloride of earbon.

In 1844 Dr. Horaee Wells practically and successfully employed nitrous oxide gas.

In 1846 the first case of anæsthetic operation under sulphuric ether occurred at Boston by Dr. Morton.

In 1847 the first operation under chloroform was performed successfully by Dr. Simpson at Edinburgh.

In 1849 Dr. Snow suggested the use of amylene.

In 1867 Dr. Richardson introduced bichloride of methy-

In 1871 hydramyl-ether and hydramylchlor, and in 1872 methylene ether and light ethylic ether, and from this period up to the present time several other substances of the methyl and ethyl series have been suggested, but as yet chloroform, ether, and nitrous oxide gas stand pre-eminent as anæsthetising agents. In the early part of the present year Mr. Bird suggested the use of ethydene dichloride, as an agent having considerable advantages over any other substances hitherto introduced, and experiments are being condueted at the present time with this product.

We will now consider the nature and power of the more important of these anæsthetic agents. Professor Simpson * gives the following list of the chief anasthetic agents:-

Simpson's List. Nitrous oxide N₂O . . Chloroform ... · CHCl, Salphuric ether .. C, H, O Nitrie ether C2H3NO3 Nitrous ether C₂H₅NO₂ Alcohol .. C₂H₆O Aldehyde ٠. .. C₂H₄O . . Dutch liquid C₂H₄Cl₂ Bisalphide of carbon · · CS₂ . . Amylene .. C.H₁₀ . . Hydride of amyl .. C₅H₁₂ C.H. CI Chloride of amyl .. C_oH_o Benzine benzoli ٠. . . Propyl C.H., . .

We cannot pass too high praise, in considering this subject,

upon the successful and indefatigable labours of the late Professor Simpson and Dr. B. W. Richardson, the investigations of the former began to be published about 1855, and ultimately resulted in the application of chloroform as an anæsthetic agent especially valuable in obstetric surgerythe implicit faith he had in it, and the severe controversies in which he nobly upheld his assertions by illustrating hundreds of confirmatory experiments, well merited the honourable distinction which he obtained. The exceedingly important experiments of Dr. Richardson upon the production of anæsthesia have engaged considerable interest throughout the medical world since 1864, and in the communications which he has laid before the British Medical Association in this department of therapeutics he bas thoroughly investigated the various effects and properties of nearly all known substances likely to be available for this purpose.

Chloroform (CHCl₃).—In my communication (see CHEMIST AND DRUGGIST, May, 1878) I fully described this substance.

I therefore refer to that publication.

Sulphuric ether, oxide of ethyl (C₄H₁₀O) is the substance prepared by the action of sulphuric acid upon alcohol. It is generally maintained that for producing general anesthesia this substance should be anhydrous, and bave a specific gravity not exceeding 0.720; it is obtained by washing ordinary oxide of ethyl of 0.735 specific gravity in water, decauting, and adding recently burnt lime and chloride of calcium, and after standing 24 hours, distilling the product

with a gentle heat.

This substance was first successfully employed as an anæsthetie agent by Dr. Morton at Boston, in 1846. The attention of the civilised world was at once drawn to this great American discovery, and it was successfully employed at the Massachusetts General Hospital. Every known variety of ethers, and of compounds containing elements of ethers, together with other volatile substances, gases, and vapours were then submitted to the test of experiment, and it was confidently felt that some better agent would hereafter be discovered which would compete with it, but up to the present time chloroform and ether have held a foremost place. In my paper on chloroform I contended that accidents which happened during its administration were due either to an impurity in the product, or a want of knowledge of the physical condition of the patient, as certain diseased states, notably, fatty disease of the heart or dilatation of the heart, increase the risk attending chloroform inhalation; and it is the risk of such accidents which has led to so much study being given to the subject and an endeavour to find a more suitable anæsthetising agent.

It is contended that anhydrous ether as an anæsthetic has an advantage over chloroform, because it does not destroy life by depressing the action of the heart, and it is upon this important distinction that some English and most of the American authorities agree in considering its greater safety; but I must here note that the chloroform of the American Pharmacopæia and English chloroform are very different products. Ether, however, has its disadvantages compared with chloroform; it is an unpleasant anæsthetic in the earlier stages, before insensibility sets in, and the length of time required to produce complete unconsciousness is a disadvantage—the time required to get the full effect varies; as a rule it is twice, sometimes three times as long, and consequently the quantity required to be inhaled is much greater; further, a restless excitement often results from its administration very different to the extreme quiet of chloroform unconsciousness; again, the danger of bringing a light near the mouth of the patient when the vapour has been inhaled lest it catch fire; and again, the effect of ether remains much longer. Sometimes its smell may be detected in the breath of a patient for days after its

administration.

Chloride of Hydrocarbon (C₂H₄Cl₂), or Dutch liquid, as it is often termed, in consequence of its being discovered by the Dutch ehemists of the last century, is one of the various fluids to which the name of chloric ether was for some time given. When equal parts of ethene or olefiant gas and chloriue are mixed together the two gases rapidly disappear, and produce a colourless oily liquid of a peculiar sweetish taste and ethereal odour. Its specific gravity is 1.247. It boils at 148° Fahr.

^{*} The Works of Sir James Simpson, Bart., edited by Sir W. G. Simpson, Bart., vol. ii.

Simpson says: - When its vapour is inhaled it causes so great irritation of the throat that few can persevere in breathing it for such a length of time as to induce anæsthesia; it has, however, been inhaled until this state, when all its usual phenonema followed, and without excitement of the pulse or subsequent headache.

Nitric Ether (C₂H₅NO₃), Nitrate of Ethyl.—When two parts of alcohol and one part of pure nitric acid are distilled together, with the addition of a small quantity of urea, ethyl nitrate is produced. It is a transparent colourless liquid, with a sweet taste and a very agreeable odour. Its specific gravity is 1 112. It boils at 185° Fahr.

This substance is easy and pleasant to inhale, and possesses very rapid and powerful anæsthetic properties. A small quantity, such as 50 or 60 drops, when sprinkled on a hand-kerchief and inhaled produce insensibility after a few inspirations. But during the brief period which elapses before the state of complete anæsthesia is induced, the sensations of noise and fulness in the head are excessive. Much persistent headache and giddiness have usually followed its employment.

Benzine (C₆H₆).—This well-known substance will produce anæsthesia, but the disadvantages connected with its administration render its practical application impossible.

Bisulphide of Carbon (CS2) has strong anæsthetic properties, but there are disadvantages in its use, one great drawback being its disagreeable odour. Experiments have been made to overcome this by dissolving essential oils in it, but without much success.

Nitrous Oxide (N2O).—Nitrous oxide was discovered in 1776 by Dr. Priestley, and in 1800 Sir II. Davy carefully examined the stimulating effects produced by the inhalation of the gas. The results obtained by these experiments gave it the popular name of "laughing gas." Nitrous oxide is made by heating pure nitrate of ammonia in a flask to a temperature of 350° Fahr., when it puts our the appearance of ebullition, and is entirely decomposed into nitrous oxide and water,

 $NH_4NO_3 = 2H_2O + N_2O_4$

As the gas is less soluble in warm water, this should be used in the pneumatic trough. In making the gas there are several precautions necessary; the nitrate of ammonia must be pure. If too great heat be applied, there will be complete decomposition with production of some of the higher oxides of nitrogen; on the other hand, at a temperature a little below that at which the gas is produced, the nitrate of ammonia is itself sublimed, either with or without decomposition.

To Dr. Horace Wells, a dentist of Hartford, Connecticut, belongs the honour of the discovery of the process of inducing anæsthesia with this gas. It has to be inhaled through an ordinary inhaler; or, in other words, if you want to produce insensibility without excitement, the gas must be administered without any admixture of air, as the excitement produced by this gas, which has given it the name of laughing gas, is probably due to admixture of carbonic acid and air exhaled from the lungs.

The advantages of this substance as an anæsthetic agent are the facility with which it can be administered, the little preparation needed so far as the patient is concerned, the ease with which the gas can be prepared in a pure state, the rapidity of recovery after the operation is over, and, above all, its almost absolute safety, and the absence of any bad after-symptoms. These constitute a very great advantage, placing it above all other anæsthetics in cases where the anæsthesia produced by it is of sufficiently permanent character to allow the operations required to be performed —for this is its only drawback, namely, that it is practically impossible to perform prolonged operations under its influence. It is here, therefore, that it is perhaps only of real value to the dentist; its effects are too evanescent for prolonged operations,

Tetrachloride of Carbon (CCl₄) is formed by passing the vapour of carbon bisulphide, together with chlorine, through a red-hot porcelain tube. A mixture of sulphur chloride and carbon tetrachloride is formed, which is distilled with potash, whereby the chloride of sulphur is decomposed and pure tetrachloride of carbon passes over. It is a colourless liquid of 1.56 sp. gr., and boils at 77° C. It is a compound

closely related to chloroform in chemical constitution and physiological action.

Dr. Richardson states, in a lecture delivered October 8. 1867 :-

"As the result of careful experiment, that both or theoretical and practical grounds it is far more dangerous than chloroform. In its action it presents the same four stages as chloroform, but the second stage is more prolonged and intensified; its worst feature in administration is the slowness of its elimination, which is fully accounted for by its high boiling-point. He therefore directed the steps of his investigations in the opposite direction, and in July, 1867, was rewarded by the observation that chloride of methyl is a gentle and certain anæsthetic. Its application, however, possesses some practical inconvenience, and it was therefore thought probable that a substance might be found intermediate between chloride of methyl and chloroform, which should combine the advantages of both without their disadvantages. The characteristics described are met with in bichloride of methylene, which obviously stands in the position indicated—

> Marsh gas .. CH3H Chloride of methyl ... · · CH₃Cl Bichloride of methylene .. CH₂Cl₂ CHC1, Chloroform Tetrachloride of Carbon CCL

Several other methyl compounds have been successfully the subject of experiments in Dr. Richardson's hands. Methylene bichloride is produced by placing a mixture of alcohol and chloroform in contact with pure zinc. On the application of heat there is set up a brisk action, during which an equivalent of chlorine from the chloroform passes to the zinc, and after a free escape of gases, bichloride of methylene (CH2 Cl2) distils over-

$$\mathrm{CHCl_2} + \mathrm{H_2} = \mathrm{CH_2Cl_2} + \mathrm{HCl}$$

It is a light volatile liquid, possessing a sweet etheral odour, resembling that of chloroform. Its boiling point is 172° Fahr., sp. gr. 1·59.

In a paper by Dr. George Archbold on the "Methyl and Ethyl Series of Anæsthetics," there is a full description of the various methods for the preparation of this and other substances. (See CHEMIST AND DRUGGIST, January 1873, p. 17). The product recommended is that prepared by Messrs. J. Robbins & Co., 372 Oxford Street, London, and I am indebted to Mr. Robbins for several of the specimens which are on the table.

The inhalation of bichloride of methylene produces anæsthesia less expeditiously than chloroform, but the insensibility is deep and well sustained, and the recovery quiet and more rapid. It appears to combine the anasthetic powers of chloroform with the safer properties of other; it produces sickness the same as chloroform, ether, and tetrachloride of carbon. Some state that it causes much more depression, and that this is its greatest disadvantage. Mr. Spencer Wells, F.R.C.S., in an address delivered at the meeting of the British Medical Association, held at Manchester, August 7, 1877, speaks very highly of this anæsthetic. (Sec Brit. Med. Journal, August 11, 1877).

Ethidene Diehloride (C2H4Cl2) forms one of the chlorinated derivatives of chloride of ethylene. It is an isomeride of ethene dichloride (Dutch liquid) produced from aldehyde. It is a colourless, neutral, oily liquid, having a fragrant cthereal odour somewhat resembling chloroform, and a sweetish aromatic taste; sp. gr. 1:247; boils at 82:5° C. It is nearly insoluble in water, to which, however, it imparts its odour, but soluble in alcohol and ether.

It is reported from likely sources that this substance is not manufactured in this country as a commercial product, nor is it likely to be so. Of the two specimens on the table one is manufactured by Mr. C. A. F. Kalbam, of Berlin, and kindly supplied by Mr. Thomas Farries, F.C.S., of the firm of Messrs. Burgoyne, Burbidges, Cyriax & Farries; the other by Mr. Robbins, of London, but manufactured abroad.

It is rather remarkable that Simpson should report so unfavourably of Dutch liquid, and that by the investigations of the Glasgow Commissioners it is condemned, whilst an isomeric substance should prove of such promise; but they found the same different effects in the two substancesbutyl chloride and isobutyl chloride, which are also isomeric.

It is claimed for this substance that the action of the heart is not affected during its administration.

Some apology may be due for my rather lengthy comments upon the chemistry of some of the foregoing substances, but, in the absence of therapeutical interest, they are interesting from a physiological point of view as illustrating some of the experiments which have been made with these bodies.

Amylene, or Quintene (C_5H_{10}), is a substance which has been experimented upon by Simpson, Richardson, and others. It was the agent introduced by the late Dr. Snow as an anæsthetic, and was once brought into severe competition with ehloroform.

The Scientific Grants Committee of the British Medical Association have instituted a commission to investigate the action of anæsthetics; these experiments are being carried on at the present time in the University of Glasgow. The commissioners state, in their preliminary report, that they propose two lines of inquiry—first, to discover wherein the special dangers of chloroform consist, and second, to try if some anæsthetic agent can be found wherein these dangers can be avoided. They have experimented with the following substances:—

Glasgon Commissioners' List.

Benzine		 	 	$C_{\nu}H_{\sigma}$
Acetone .		 	 	$O_0H_1^*$
Pyrrol		 	 	C_4H_5N
Bichloride of m	ethylene	 	 	CH ₂ Cl ₂
Amylene .		 	 	C.H.
Butyl chloride.		 	 	C,H,Cl
Ethene dichlori	le	 	 	$C_1H_4Cl_2$
Methyl chloride		 	 	CH ₃ Cl
Ethyl chloride.		 	 	C.H.Cl
Nitrous ethyl et	her	 	 	$C_2H_2NO_2$
Isohutyl chlorid	e	 	 	C.H.Cl
Ethidene dichlo	ride	 	 	C'H'Cl'

Of the first 10 substances they report: It is apparent that the above substances all possess disadvantages which render them unsnitable for general use as anesthetics, but the action of the remaining two are more promising. Ethidene dichloride seems to be the greater favourite. They are experimenting further themselves, and are collecting evidence from the profession respecting this substance.

Physiological Action of Anæsthetics.—Various theories have been advanced at different times trying to attribute the power of producing the peculiar action manifested by this class of bodies to one or more of their constituent elements. The one which has met with most favour is that in which the power is said to be resident in the carbon, from which, it is maintained, all these agents derive their anæsthetising virtues, more or less modified by the other elements with which the carbon is associated. There is one insuperable objection, however, to this view, for the experiments of Davy and Wells have shown, and the fact is maintained, that nitrons oxide gas is an anæsthetic of considerable power, and yet it does not contain carbon. There are other similar theories, but none are successful in tracing the peculiar action to any particular element, or even in successfully demonstrating the manner in which the effect is produced. Dr. Murphy holds the following view:—"He thinks that chloroform, for instance, not being soluble in blood, travels through the circulation unchanged. This free chloroform, he says, exerts a great affinity for oxygen, so as to prevent the usual affinities taking place. Carbonic acid, therefore, is not formed in the same proportion, so that carbon is not sufficiently removed from the tissue, and accordingly he supposes the anæsthetic influence is kept up.

He supports this view by the fact, that intense cold acts as an anæsthetic, and that this is owing to cold diminishing the amount of carbonic acid.

To endeavour to arrive at some satisfactory solution of these difficulties, the Glasgow commission propose to investigate

- (1) The changes, if any, produced in the gases of the blood.
 - (2) The changes effected in the gases of respiration.
- (3) The effects of anæsthetics on nervous conduction and mental phenomena as observed in man.

When introduced by inhalation into the system, anæsthetic

vaponrs act npon the brain and sensory nerves in such a manner as more or less completely to abolish their natural sensibility. The degree in which they do this can be in a large measure regulated by the quantity administered.

Local Anæsthesia.—The production of local anæsthesia was doubtless accomplished by the ancients; but for the practical applications of the present day we are undoubtedly indebted to the researches of Dr. Richardson.

Richardson's Compound Anæsthetic Ether, for the production of local anæsthesia, consists of a mixture of one part of hydride of amyl to four parts of anhydrous ether. It boils 10° under the temperature of the human body, and its specific gravity is lower than that of pure sulphuric ether. This compound induces in the form of a spray perfect inscnsibility of the skin in from 10 to 20 seconds of time, and it is far preferable to any other substance suggested. (See "Year Book of Pharmacy," 1872, page 179.)

Dr. A. H. Smith recommends carbolic acid as a local

Dr. A. H. Smith recommends carbolic acid as a local anæsthetic. *See Medical Times and Gazette*, 1872, vol. ii.,

The importance to the science of medicine of the introduction of anæsthetics can scarcely be over-estimated. By the employment of anæsthetics in surgery, the patient not only has his nervous and mental tax relieved by the apprehension and fear of an operation being allayed and by insensibility being produced, and not only is the work of the surgeon relieved of a sonree of embarrassment and operation, the most difficult and delicate undertaken, which would otherwise have been impossible, but the death rate in most cases has been universally testified to have greatly diminished.

The PRESIDENT expressed his appreciation of the communication, and stated that from inquiries he had made he learned that dichloride of ethydene had been tried in Liverpool in 15 cases with most promising results, the action of the pulse not being interfered with. Bichloride of methylene was found to be of little value when administered to inchriates, but with children it was most efficacious. Bromide of ethyl was an important anæsthetic, which had not heen referred to.

Dr. Symes proposed a vote of thanks to Mr. Mason for his valuable and exhaustive paper. He stated that with regard to ether, Mr. Mason said that anhydrous other was preferable; he, however, believed this was a disputed point among medical men, some preferring the ordinary ether to the anhydrous. Dr. Skinner, of Liverpool, who was an assistant to the late Professor Simpson, considers that with anhydrous ether there is a danger of suffocation when administere I, which is obviated when using the ordinary ether, and this description was used in America long before it was taken np in this country for surgical operations. He might state in reference to chloroform that Professor Simpson had never lost a patient under its influence. With regard to local anæsthesia, one drawback counceted with its application is that there is a great deal of pain when the thawing sets in, and this has led to some medical men discarding its use.

Mr. Abraham said he had listened with much pleasure to the paper, but he was sorry Mr. Mason had not mentioned the name of Mr. David Waldie, F.C.S., one of the honorary members of our Association, who was the first to bring ehloroform before the notice of the medical profession in a lecture delivered to our Association, and suggested its use to Professor Simpson for the purpose of producing amesthesia. At that time no anæsthetic was kuown excepting the ether which was used in America, and Simpson publicly acknowledged that he had obtained the suggestion for the application of ehloroform from Mr. Waldie in the first paper which he published on the subject. On a previous occasion, some 10 years ago, Dr. Watte, a dentist in Liverpool, hrought hefore the notice of our Association the properties of nitrons oxide gas, which was used in America, and showel the apparatus which was then used for the purpose of inhaling the gas, and asked the American visitors present if they could give any information on the subject.

Dr. VANDERBECK stated that nitrous oxide gas was largely used by dentists in the United States for producing anesthesia, and that the gas was stored in black bags, and made use of when required. The use of ether was becoming almost entirely discarded, and he knew personally several of the most eminent hospital physicians who would only use chloroform.

Mr. S. M. BURROUGHS stated that he could confirm these statements, and he would like to add that perfectly pure chloroform was manufactured on a large scale in America by Dr. Squibh and Messrs, Powers & Weightman; he did not think that any was experted from England to America.

did not think that any was exported from England to America.

Mr. M. Conroy, F.C.S., seconded the vote of thanks to Mr. Mason, and a further discussion followed, in which Messrs. Dickens, Armstrong, and others took part.

Mr. Mason, after replying to the various questions raised, thanked the members for the interest they had taken in the paper and their kind appreciation.

FORMULÆ OF SECRET MEDICINES.

(Continued.)

The Formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

KÖNIGSEER KINDERPILLEN—KÖNIGSEER CHILDREN'S PILLS.—Pills weighing '15 gramme, each containing '05 gramme powdered opium, with liquorice juice and marshmallow. One-sixth or one-fourth of a pill, according to age, is the dose for a child. Professional angel-makers have no difficulty in obtaining them.—Hager.

Schmerzstillende Kindertinctur—Children's Paincurer (sold by Pasquale Caterinusi, Hamburg).—In a small bottle are found 8 grammes of a dusky-brownish yellow fluid, having an aromatic taste. Three or four drops are given to children for internal troubles, gripes, ordinary and bloody dysentery, &c. The fluid contains the soluble portion of jalap-root, I gramme; saffron, '4 gramme; nutmeg, '05 gramme; cinnamon, '01 gramme; peppermint, '1 gramme; caraway, '1 gramme, in a mixture of spirit 4 grammes, and water 4 grammes.—Hager.

SEALY'SCHER KITT—SEALY'S CEMENT.—A mixture of porcelain clay (kaolin) with about 15 per cent. of caustic potash solution.

SPANISCHE KLOSTERESSENZ—SPANISH CLOISTER ESSENCE (with a pamphlet by Dr. Venus).—For nervous weaknesses, hysteria, &c. Various essential oils dissolved in strong spirit.

KÖNIGSTRANK—ROYAL DRINK (Jacoby, Berlin).—A panacea. A filtered mixture of cider, 20 parts; syrup of potate starch, 3 parts; gum arabic, 1 part; plum juice, I part, mixed with a few drops of Elixir Proprietatis Paracelsi.* 330 grammes, 1s. 6d.—Hager.

Krätzetinctur—Itch Tincture.—An aromatic solution of mercuric chloride and nitre in alcohol.—Vanquelin.

Kräuterbier, Gesundheitsbier—Herbal or Sanitary Beer (Emmerig, Berlin).—For chronic diseases of the organs of respiration. Ground ivy, coltsfoot, speedwell (Veronica Chamædrys), water germander (Truerium seordium), liquorice, and kiln-dried malt, of each about 2 parts; infuse with warm water 100 parts; mix the filtered infusion with 200 parts ordinary beer, in which 1 part sal ammoniac is dissolved. 375 grammes, 9d.—Hager.

KRÄUTER-BONBONS—HERBAL BONBONS (Dr. August Wilhelm Koch, parish doctor, Heiligenheil, made by Raymond & Co., 27 Oranienburger-strasse, Berlin).—Bonbons of sugar, an extract of bitter oranges, and sufficient violet-lake to give them a purple-violet tint. Eighteen, weighing about 60 grammes, 6d.—Wittstein.

KRÄUTER-BRUST SYRUP—HERBAL PECTORAL SYRUP (Friedrick Dietze, Grimma).—A solution of 13 parts brown sugar in 10 parts marsh-mallow tea. 360 grammes, 1s. 6d.

Weisser-kräuter-brust Syrup—White, &c. (Dr. Hoffmann, Dresden).—62 parts sugar dissolved in 38 parts water. 125 grammes, 9d.—Dr. Wittstein.

Kräuter-brust Syrup (Dr. A. Lazarowits).—A sanitary preparation (from the factory of Albin Müller, Brünn). The label states that it is for old-standing coughs, pains in the chest, hooping cough, difficulty of breathing, and all chest and lung troubles. Suitable for adults as well as for children. A mixture of concentrated sugar solution and syrup of potato starch in equal parts, with sufficient pectoral tea (see Pharm. Germ., under "Species Pectorales") to justify the epithet "Kräuter." 170 grammes, 7½d.—Hager.

DR. RICHARDSON ON PHASES OF QUACKERY.

[We are indebted to the "Medical Times and Gazette" for the full text of Dr. Richardson's presidential address to the members of the Medical Defence Association, to which we referred last month, and which will, no doubt, be read with interest by many pharmacists.]

FOR my part, holding as I do a position as a public man, as well as that of a professional man engaged in the ranks of those who practise medicine, and as one jealous equally of public as of professional reputation, I would not for a moment hold the presidency of this Medical Defence Association were I not solemnly convinced that the work of the Association is for the public, as it is also for the professional, good, and, indeed, for the public good firstly and mainly.

So intimate and delicate are the relationships between the profession of medicine and the public, that whatever is for the real benefit of the profession is equally for the benefit of the public. The higher the professional standard of medicine is raised, the higher are the members of the great body of medicine placed above want, and therefore above the temptation to commit sin. The higher the members of the profession are advanced in the social scale, and of worthy public estimation, the better are the true interests of the people, in all that concerns the care of their health, considered, served, and satisfied.

The reason why these positions are as I have stated, is plain enough, and is in the nature of things positive. That which the sick man requires, first of all, in his sickness, is protection. He is disabled, and must be protected-protected against himself more than against anyone else; for the strongest of men and women, the strong of mind sometimes even more readily than the weak, are very soon off their mental balance when the travails of disease overtake them. It has been in the range of my own experience, more than once, that the most educated of physicians, and in their periods of sound health the most fervent in their detestation and denunciation of quacks and quackery, have during diseased states of body-not of a fatal character-been ready to run after the veriest scamps in the ranks of quackery, and to resort to the most wanton and foolish of quackish devices, paying the quacks withal for their knavish tricks while willing and unselfish brethren have been taxed to wait and attend without so much as a thought of compensation for time, anxiety, and trouble.

With such facts as these staring us in the face, what shall we say to the members of the general public, if they in like manner, under the mental alienations of disease, or under alienations of fear and love for those dearest to them, run from the learned and honest, to the illiterate and knavish, and seek, in the depths of superstition, what they think they have failed to find on the heights of science? What shall we do to meet the danger to which these seekers expose themselves, and to lessen the communicating and communicated evils which that seeking tends to keep alive?

In the answer to those questions is included the whole subject of what we call Medical Defence. Our existence as an association is to defend and protect the sick. We have no other object whatever, and if we were called "The Sick Man's Defence Association," instead of the Medical Defence Association, the term would equally well describe our true position.

The object we have in view is, then, distinct enough, and assuredly the range afforded us for our operations is sufficiently wide, for we have to study the movements springing from the worst instincts of mankind. Quacks are born, not made. Quaeks are born criminals who by accident of position are led to practise their criminalities on the issues of life and death. They exist within the ranks of the profession of medicine, as well as out of it. A little change of circumstance in the way in which his life was first cast, and the quack had been a burglar, a bandit, a forger, a thief, a receiver of stolen goods, a common murderer. Nay, he might be of the worst of these the worst: for some of these may show qualities of skill and of courage in the commission of their offences; while the quack practises like a mean coward on the innocent and the enfeebled, so that he is the most contemptible as well as one of the wickedest of the criminal community.

^{*} Aloes and myrrh coarsely powdered, of each 2; saffron, 1. Pour over them alcohol, 24; dilute sulphuric acid, 2; macerate for eight days and filter. This is the Elixir Proprietatis Paracelsi, or Saures Aloëelixir, of the Ph. Germ.

On the ground that we depise and justly hate this criminal, that we are not afraid of him, and that we would if we could rid the world of him and his crimes, we claim a reason for our existence, and for being acknowledged and supported by all who are right-minded and ready to defend the feeble. It is circumstance, not intention, that puts this organisation first into our hands as medical men. We see the evil most clearly, and therefore move towards its extinction most readily; but our desire is to have all the intelligent public moving with us, and we know that until we have this assistance we shall make very slow progress indeed in way of prevention, although we may do much to discover the road to progress by surveying the lines on which quackery is laid.

TERRORIST QUACKS.

There is a form of quackery which is essentially of the lowest, if not the wickedest, in the whole field of quackery, which in the most systematic manner deals with the more secret and objectionable of human infirmities—I mean with diseases which spring out of sensual indulgence. The men who carry out this line of bad business are numerous, as a class, numbering, I believe, in England and Wales alone from three to four hundred. They are not, as a rule, men who have received any medical education. A few of them may have attended classes, and a few may have passed through their curriculum and failed in examination. The majority are mere ignorants who assume to possess a medical qualification from a medical college of some other part of the world. They base their elaim to be trusted on the ground of the secreey of their knowledge and the secreey of their proceedings. The very fact that they themselves are obscure, hidden, distrusted, is the reason too often why they are consulted by those who, in the matter of their illness, themselves wish to be obscure and under concealment. Many a youth, who under ordinary circumstances would go to the family physician or surgeon for advice and assistance, goes to one of these men because he thinks he can open his mind to such a man freely, and communicate his distress without fear of discovery.

A number of these quacks catch their vietims by means of books which they write, and which they advertise largely. In the books so written there is nothing new. They are nearly all founded on one rather old book, which was published in English in the early part of this century, which from its title assumes to be the work of one of the ancient Greek philosophers, Aristotle, and which still floats about as a kind of suppressed book to be read only in secret, and never acknowledged. There can be no doubt that a few of the men engaged in this line of practice acquire money, and some of them are able, under an assumed name, to conceal their abominable avocation even from their own families. They pass themselves off as "City men," or as "merehants," or nnder some other general term. One of these men once took a sudden alarm that he was about to receive condign exposure, if not condign punishment, from our Association, and he thereupon wrote to us imploring us to let him escape. He said that none of his family knew his mode of life, and that for them to know it would be ruin to their prospects. He faithfully promised to retire from the quack business at once, and, in proof of his abhorrence of it, he tendered the gift of five guineas to the Association, to enable it to prosecute another quack of a similar stamp and character! We gathered from this, that these quacks do not entertain the Christian virtue of loving one another—and that we rather accepted as a hopeful sign.

The greater number of these men lead miserable lives. If a few of them get wealth they are afraid to enjoy it; most of them do not get money, but sink from one lowness to another, until they become the very dregs of society.

These men do an incalculable amount of evil. They not only directly rob, they corrupt their victims. Seizing npon minor failings of a physical or moral kind, they distort or caricature such failings until their victim is literally distraught with the idea of the life-long misery that is in store for him. Moreover, having raised this misery, they do no mortal thing to allay it. It is a part of their shameless policy to keep the mental wound open, to offer temporary relief at the most, and to maintain silence at the cost of a levying which knows no end so long as the fears of the victim hold ascendency over the acts of his life.

Occasionally the quack of this school is in the hands of

other men less scrupnlous even than himself—men who hold him, direct him, use him. In one instance which I have known, the quack, or ostensible practitioner, was a dnly qualified and—strange to say—in his better days a well-informed and genial man. He carried on his nefarious work in a house belonging to his employer, a wretched money-lender, who, acting as servant to his tool, actually kept the door, together with the most rigorons account of every patient who came, and of every penny that was paid.

The respectable public cannot think we do wrong in keeping an eye on quacks of this order. If the public understood its own dearest interests, if it understood the interests of those youths who spring from it, and who are to become the backbone of the next generation, it would give us more than thanks for our vigilance, it would give us its earnest assistance—

"To whip these scoundrels naked through the world."

I am glad to say that the very fact of the existence of our Society has largely checked this class of men. "Resist the devil, and he will fly from you" was never better illustrated than in their histories. The merest attack on them disturb their success; and, in short, they exist simply because they are permitted. The public gives them a tacit licence, and that is their diploma. Supported by the public voice, we could put them all down in twelve months, and relieve the young of their pestilent infinence for this generation.

HOMICIDAL QUACKS.

There is another entirely different order of quack, more dangerous, and in one sense more directly mischievous, because he is even murderous in intent. This man, as a rule, has his accomplices in the female sex, and works in combination with them. He carries out one of three courses, or sometimes two of three; or, again, three of three. These courses are—(1) to stop life at its beginning, by artificial means; (2) to produce abortive birth; (3) to destroy the life that has been produced at the first stage of its existence.

The class of criminals who are thus employed are far more numerons than many suppose. The rewards for their crimes are great; and it sometimes happens that the persons who employ them hold what is called "position" in society. The crimes of the bulk of these are very difficult to trace home, as the records of the coroners' courts on the still-born too convincingly prove. With some of these men a certain amount of skill, acquired by actual practice, enables them to destroy the infant life and save the life of the mother so adroitly that conviction becomes almost impossible. It is only when the unfortunate mother is fated to die with her offspring that any discovery of a true and convincing kind is made.

With offenders of the first named of this family of quacks, we have more than once been made acquainted; and in one instance the police gave us information of the most important kind. The result was that both the words and the works of one of the lowest representatives of the family were effectively stopped.

With the offenders of the second and third orders of this family we have not been so successful. They are too often shielded by a legalised diploma; and, as I have shown, evade discovery by a perverted knowledge and skill.

NOSTRUM-MONGERING QUACKS.

There is a third order of quacks, the members of which are not perhaps intentionally criminal, but who, nevertheless, take npon themselves dnties and functions that are altogether foreign to their knowledge and skill. It is not so much that they practise irregularly or without a licence, as that they pretend to treat diseases with the names of which they are not correctly familiar, and with the nature of which they have no conversance whatsoever. Some of these quacks take one particular disease or one particular set of organs of the body under their pretended care; others assume to treat diseases in general, in which case they commonly pretend to possess a particular kind of remedy which adapts itself to every kind of case. These last-named, owing to the method they pursue, attain by the rnle of chances a certain measure Vending some one active medicinal substance, of snccess. such as opium, quinine, or iodide of potassinm, and snpplying the remedy to a great number of persons indiscriminately,

hey are sure to give it every now and then to a person who vill be benefited by it, and so in time they get together a ist of successful cases, or, as they call them, cures. This vas signally the fact about five-and-twenty years ago in the areer of a noted quack woman of the Midland Counties, whose emedy was simply quinine given under various disguises, but lways in full and effective doses. There are so many forms f disease in which quinine acts as a splendid remedy, it is o wonder that this quack had a long list of "cures," each f which, magnified in number by admiring credulity, gave credit to her practice which no regular practitioner of nedicine could legitimately attain. The same kind of sucess is, I believe, at this moment attending "a mode of cure," is it is called, in which the curative agent employed is otassium iodide. Others, again, in this family of quacks out out a particular remedy for one particular disease, and ry no further. I believe that, without an exception, the nen who follow this plan do no more than use the prescripion of some well-known physician or surgeon, which precription has either been published or has come into their ands from the original. One of the most largely sold pecific pills was, to my own knowledge, made from a ormula in the day-book of a late eminent general practiioner. The vendor of this pill, who assumed a new name n order that he might carry out his design without being generally known, made no sceret of the source of his remedy o the person from whose book he originally purloined it. This family of quacks is very large and industrious, and, I ear I must add, successful. The members of it make ortunes, and they connect themselves so closely with the bere sale of their nostrums, without making a pretence to rescribe or practise, that they succeed usually in evading all the existing laws which might be considered as reaching hcm. It is fortunate for them, moreover, that, although y their haphazard method of dealing out active remedies hey often inflict injury, it rarely happens that the injury is atal.

SPECIALIST QUACKS.

There is another family of quacks, the representatives of which carry out what they are pleased to call a new system, r a distinct system of medicine. Some of these eall themelves Botanic practitioners or Herbalists, and comprise the raternities which my honourable friends, Mr. Serjeant Simon and Mr. Burt, so kindly took under their wings the ther night in "another place." These practitioners are ery numerous; they exist in every large town. In their practice there is nothing diagnostie, neither is there any cientific art or skill of a therapeutical character. At the ame time they hold in their hands drugs of a most potent ind, which they use boldly, and often with the production f extreme effects on the body. Lobelia is one of their rime agents, and digitalis is another, and by the application of such active medicines they sometimes inflict a fatal result. Then they are brought up before the coroner, and oecasionally are committed for trial. In most cases they escape punishment, and proceed as before. Many of these persons are not intentionally doing wrong. They are the last of the old herbalists of the Culpepper school, and of a school of medicine proper which existed prior to the time of Boerhaave. They cling to the crude notions they believe in with all the tenacity of superstitious fervour. From this fervour they make others trust them, and produce a seet of believers in them and their doctrines. They do not mix with other charlatans, neither do they come by accident into their business. "They learn their business," as one of them told me, "in a regular way, like other tradesmen and some of them still retain the remnants of astrological traditions.

Akin to the Botanicals are the Medical Electricians and the so-called Galvanisers: but these are not so regularly trained in their practice as a vocation. These are often mere ne'er-do-wells, who learn a smattering of electricity, and, obtaining a battery, apply the current without regard to one

single physiological consideration.

There is still another group of this same family of irregular practitioners, the members of which claim to have a special skill in the treatment of the skeleton. These trade under various names—Bone-setters being the name most commonly applied to them. They exist in or near many of our great centres of population. They, like the botanic specialists, are born to their work, and very often the business descends in

family line. They have no necessary knowledge of anatomy, and no method which they care to disclose to those who would learn from them. Their invariable practice is to find a dislocation, and to do something, much or little—and too frequently much. I know an instance in which one of these men, mistaking a strumous suppuration near the shoulderjoint for a dislocation, actually pulled the humerus out of its place, and produced a true dislocation of the head of the humerus into the axilla. These bone-setters are popular, and are defended by popular superstition. Raised to the place of legitimate practitioners, their skill is gone, and their credit with it. The late Dr. Willis told me he knew one of these men, who, after having been bred to his empirical calling, came to London to study anatomy in the regular way, and who was so astounded at a description of the carpus given by Abernethy, that he became faint from the remembrance of the manner in which he had manipulated that exquisite piece of mechanism in his ignorant practice. From that moment he lost all faith in a skill which he had previously conceived was of the most perfect order, and which he had ruthlessly excreised. I should gather from what I have observed that the business of the bone-setting quacks is rather on the increase. The favour of some of the wealthy of the community has encouraged these quaeks to multiply, while the semi-patronage which has been given to certain of them by some professional men, as if in their stupid mystery there was really some valuable lost art, has helped not a little the public credulity. Within the last few weeks I have been informed that certain of these quaeks can actually secure the assistance of duly qualified practitioners to administer ehloroform or other anæsthetics for them during what they have the audacity to call "their operations"! If this be credible there need be no cause for wonder if bone-setting should become a fashionable depredation.

Connected somewhat with the bone-setting empirics may be mentioned another mechanical fraternity of modern growth which employs itself in irons-mongering. The unqualified practitioners of this craft pretend to a knowledge of deformities of the skeleton, and especially of the spine. They assume to treat diseases in the most pretentiously systematic manner, speak openly of their "patients" and of their operations, and get large fees for locking up poor human beings in iron cages which would have done no disgrace to the Spanish Inquisition. They do endless mischief, inflicting it too often on the feeblest members of the enfeebled

community.

PROTECTED QUACKS.

There is a fifth family of quaeks, which, assuming the manner and character of general and fully licensed practitioners of medicine, is given to practise without any licence whatever under different shades of protection. These men have caused us a deal of trouble. They are sometimes men who have gone through a certain part of a regular medical education; they are sometimes men who have had no education at all; and, again, they are sometimes men who follow at the time they are engaged in their quackery some other occupation in which they have been trained. They fill up their leisure in the quack practice. I know of one of these now who is in an office, at regular work there, and who between office hours attends patients suffering from croup and other of the most solemn diseases. The immunity which these different kinds of quacks experience is due to the protection they get from traitors in the camp of medicine itself. They put up their names as curers side by side with the name of some duly qualified medical man. The traitor signs the certificate of death in cases of death, rushes in in emergencies, and, in a word, covers his friend with the protection of a licence which he has sworn shall never be degraded. It is a pitiable disclosure to have to make, is this, but it is as true as it is pitiable. We have known instances where the protecting man has been residing nine and ten miles away from the protected. A mere sense of greed, rarely of necessity, leads to the course of conduct so subversive of all professional morality, truth, and honour.

COUNTER PRESCRIBERS.

We have had many times to consider the practices of those amongst the unqualified who are accustomed to prescribe over the counter for the evils that afflict humanity.

We have rarely met in council without having had laid before us some case of irregular counter practice. Those who are charged with this irregularity are dispensers of medicines-druggists and pharmaceutists. The extent to which this form of irregular practice is carried out is extremely variable. The highest class of pharmaceutists discard it altogether; the lowest class cultivate it sedulously, and, no doubt, turn it to a profitable account, trespassing largely on the province of medicine proper. The majority carry out the practice in a modified form, giving as little advice as possible, yet never refusing it altogether-believing, in fact, that it is a necessary part of their vocation. According to the strict letter of the law, we think that the gentlemen who carry on the counter-prescribing business are constantly breaking the law, but we should never dream of classifying them with the other families of the baser sort which have been described in previous sentences. I shall take the opportunity, before I sit down, of considering how that which is irregular in this line of practice may possibly be arranged in an amicable and satisfactory manner. The work of the Pharmaceutical Society has tended to make pharmacy a science, with which medicine should be in friendly and recognisable communion, to the ultimate advantage of both and of the commonwealth.

I have thus placed under their different heads the various classes of irregular practisers with whom we, as an association, have come into contact. There is a remnant of another class which once was the first of all—I mean the old peripatetic, who wandered about to sound of fife and drum, a truly historical being, and now and then a veritable philosopher. But the remnant is a remnant now. In some English cities there remains still a licensed corner of the street in which the peripatetic may, at stated times, stand and "cure"; and there are also several market towns in which he still keeps his stall, sells his vermifuges, and exhibits his pathological triumphs. Taking him at his best, he is in this day reduced to worms and warts, with an occasional invasion into corus and bunions. He must be too harmless to be cared about, however, for we, officially, have

no reports of him whatever. Sie transit!

I know there is nothing at all that is new in these descriptions in the way of information to the profession or even to the public, but I have tried with some pains so to marshal the facts that we may see more clearly the work of reformation that lies before both the profession and the public. To that topic let me next ask your indulgent attention.

THE SUPPRESSION OF QUACKDOM.

And this fact, I think, at once stands out, that the evils to be met are very complicated, and are only to be dealt with by the process of treating them one by one, and seeing how they can finally be grouped together to be brought under practical legislation. I use the word "legislation" with a sigh. It is necessity, not desire, which enforces its utterance. I know it would be far better and far happier for us who practise medicine within its legitimate boundaries if we had no occasion to ask for legal protection, and if the people had no occasion to ask for legalised practitioners. But, alas! there is so much crime, both in the way of omission and commission, amongst the irregulars in medical practice, it were itself a further crime to wait for the day when general enlightenment shall render the rule of law the rule of oppression on the one side, and of privilege on the other. We must still have some legal protection for the afflicted, even from themselves, from their weaknesses and vacillations, and for their own interests. We must have it specially for those who, being young and innocent, are not as yet a law unto themselves, but are under the direction and guidance of those who are their masters and directors.

It is probable, I dare say, that the day will come when all the learned professions will cease to exist. We none of us can fail to discern, if we use our discernment, that almost all the evils we have to contend with are due to the follies or ignorances of the human world. In law an insanity of purpose in his elientèle keeps the lawyer employed. It is next to impossible to suppose a lawsuit in which one of the parties concerned is not to some extent insane, while in many instances both parties are wildly insane. In medicine it is most difficult to find a case in which some error of judgment, or action of the present or of past generations, is not the root of the evil; an error which a better and sounder

knowledge and foresight will ultimately prevent. But while these varied insanities and errors last, some persons must be duly trained to study and meet them for the time, and by the study and practice to suggest the final means for their complete removal. Such persons must, in their turn, be duly protected in their high vocation; while those who do not dare to face the same ordeal of training, and who, from ignorance or selfishness, claim to rank with them, must be put down by all fair and honest means.

We who stand up for medical defence ask for no more and

no less than this scant and wholesome justice.

When we look back upon the different qualities of the different classes of men who make up the irregular corps of physic, we soon discover that different methods of treatment require to be pursued in the process of suppression. To these methods we have given long and close attention in councils

Taking up those groups which I have included under the head of the terrorists, the nostrum-mongers, and the specialists, we are of opinion that these will best be met by a clause in the proposed new Medical Act which shall not merely prevent them from assuming false medical titles, but also from assuming false medical practice. To the common mind this will seem to be the only use of such an Act, and yet it is the fact that we have had from our practical experience to urge this action upon the Government, and, as it will be seen, with good effect. Should our suggestion, simple as it is, pass into law, the reform it will effect will be most important. It will correct dangerous malpractices in surgery as well as in medicine, and it will supersede altogether the old and impracticable power of the Apothecaries' Company, a power always partial in action, uncertain in its exercise, and of little real use or authority.

Over the heads of the terrorists we have, moreover, some additional authority. In order to carry out their loathsome craft, they constantly come under the Act for the suppression of obscene publications and practices, and by a vigilant observation of their *lâches* in this respect they are to be brought under frequent subjection. In the past year, as our report explains, the association has been the instrument of stopping the works and acts of one of the most unclean

members of this fraternity.

It has been suggested more than once, that in dealing with the class of quacks now before us we ought to protest against the patent medicine system, and to urge on the Government its speedy abolition. The subject is one we shall have to consider, but the fact is that the advertised quack remedies that are patented are generally innocent trash when compared with the unpatented preparations. I rather think that the patent laws might be enlarged, to the benefit at once of the public health and of the revenue, by enforcing that no medicine should be advertised as a specific nuless it be not only patented, but the secret of it disclosed—which is not now done. I also think that great good would come from pressing the rules of the Sales of Poisons Act on the sale of many poisonous preparations vended as medicines. These are all points on which we would like to have the opinion of competent judges.

The two classes of men whom I have called quack homicides and protected quacks are not so easy to suppress. They sail, as a general rule, directly or indirectly, under the legal diploma, and they use the very means which are intended to protect the public interests, for the purpose of intended to protect the public interests, for the purpose of intended to protect the public interests, for the purpose of intended to protect the public interests, for the purpose of intended to protect the public interests.

flicting injury and even death.

In reaching these persons our recourse so far has been to watch the proceedings in the coroners' courts in cases where good ground for suspicion has been laid before us, and to insist that the inquiry shall be carried out to its fullest fair degree. We have also paid much attention to the mode in which certificates of death are drawn up and signed, and have communicated with the Registrar-General, who is fully alive to deficiencies of registration, in relation to the extent of the present evils and the best mode of amending them.

My own view is that an amended system of registration would do more to suppress secret crimes committed by the classes of pretenders now under consideration than anything else; more even than the establishment of a public proscutor, valuable in executive action as such an officer would be. In this opinion I am glad to be supported by so great an authority as Mr. Edwin Chadwick, whom I see present, as well as by our great statistical authority and vital

physicist, Dr. William Farr, who also honours us with his presence. I further incline to Mr. Chadwick's idea, that the medical officer of health ought to be an officer formally entrusted with the corroboration of all certificates of death; that every such certificate should pass under his supervision, and should not be officially received as a permit for burial or other method for dispesing of the dead until his consenting signature appears upon it.

In some instances of notorious irregularity, in which the pretenders have been at their work under the protection of a legally qualified man, we have been able to remove the scandal by an appeal to the protector direct: by letting him know that we were aware of what was going on, and by suggesting that he should withdraw an assistance which was

so derogatory to himself and to his profession.

The class of irregular practitioners who have caused most anxiety, from our wish to be scrupulously just to them, has been that class which is called the counter-prescribing class. Without for a moment admitting that in law there is any class privileged to prescribe at all out of the ranks of medicine, we have ever felt that the dispensing chemist is in a most difficult position, and that he is sometimes even obliged to break the letter of the law.

It is inevitable that so soon as a man begins publicly to sell medicines and remedies, buyers will begin to seek advice as to remedies from him. It is inevitable also that in emergencies he will be called, by the purest dictates of humanity, to supply remedies according to his best skill and

iudoment.

All this we admit, and we look not with jealousy or dislike, but with sincere admiration and sympathy, on those great labours for the improvement of pharmacy, which, commencing with the late Mr. Jacob Bell, have been so successfully, assiduously, and handsomely earried out by the Pharmaceutical Society. The higher class of scientific pharmaceutists are no longer aliens to us, but brethren who bring into practical utility for mankind those curative agents which the higher scientific minds of our profession search for and discover.

While, therefore, we have determined to prove, and have proved by one crucial case, our incontestable rights, we are not wishful to let matters rest unsettled, though based on rights which may seem favourable to our interests.

I, for one, at any rate hold that the time has come when the difficulty that is now before us of counter-prescribing shall be met, not by levelling down, but by levelling up; that is to say, by making such prescribing a perfectly legal practice in the hands of a specially-elevated and examined

class of practical pharmaceutists.

It seems to me that the day has arrived when the Apothecaries' Company—still a good and useful body, and one that has done admirable work in its time, but which is now becoming practically defunct as a medical licensing body—should join with the Pharmaceutical Society in establishing a thoroughly good examination, the passing of which should enable the holder of the licence it would confer to prescribe, without molestation, and without anxiety as to legal consequences, for those minor ailments which the druggists now prescribe for without any licence at all, and often without any knowledge at all, and which they will continue to prescribe for, by the public determination, whether they desire it or not.

In the examination which should be provided for the purpose now proposed, there is no necessity to think of anything commonplace or superficial. The pharmaceutical examination which at this time exists, and which has already half anticipated the movement, might stand as it now does at the Pharmaceutical Society, and, with the exception of midwifery, all those parts of the present examination for the licence at the Hall that are not strictly included in the pharmaceutical

division might also stand as they are.

For this combined examination there would soon be plenty of excellent candidates, if the admission were reasonably

accessible.

The qualification thus granted, and extending solely and legitimately to the counter practice, never to outdoor visiting, would at once smooth away the present difficulties and persistent annoyances. It would define responsibilities and duties in the clearest manner. It would not give the dispenser the right to sign a certificate of death, nor any medical certificate whatever; it would not give him the right to call

himself a fully registered practitioner of medicine; but it ought to give him the exclusive right to dispense publicly all medical substances.

With the class of men who would by these steps become the pharmaceutists of this country, the professors of medicine and surgery proper need have no cause for quarrel nor jealousy. They would be highly educated men, occupying a much higher scientific position than the druggist occupies, as a general rule, at this time; and they would be such able dispensers and professional allies that all who were engaged in practice purely would cease to feel any necessity for dispensing medicines or for doing anything more than attend the sick and prescribe for them.

By this plan, also, as I venture to think, the medical requirements of the community would be supplied on a sound and uniform system. There would be physicians and surgeons practising amongst the people, a first and moving division of medicine. There would be a body of educated men always at their posts, a second division, carrying out methodically the practical directions of the first division, and, in minor cases and emergencies, ever at hand to render, in an efficient manner, services which they now render

without any reference to efficiency at all.

I make this suggestion on my own responsibility, connecting my colleagues of the Medical Defence Association in no way with it, except as they may, on reflection, wish to be connected with it. The suggestion is based on the principle that the public necessity, which is the first thing to be considered, and which, in this instance, must be considered apart from professional prejudice or idea of what merely seems good for our profession, or blindness to the open fact that what is best for everybody is best for our profession and for every profession. For the proposition I shall, I know well enough, be called a visionary. But the vision here stated will certainly become, in time, virtually, if not in all details, actually the fact. Then it will be forgotten as a vision. It will sink into common work-a-day life. So far, I learn from experience, is the fate of visions, and au, nevertheless, content with them, because they answer the purpose for which they were originally intended.

If it would not have broken the strain of this discourse, or if you were not too wearied to follow a new theme, I had done well to turn aside from the irregular ranks of physic, and to direct attention, from the experience of our Association, to some of the irregularities that have been brought before us, in and within the legitimate pale itself:

For never can true wisdom dwell with those Who, playing tricks with fortune, dare not look At their own vices.

And, if we, from the vantage-ground we have gained by steady acquisition of facts, facts not intentionally sought after, but literally forced upon us, were to express all we have learned, we should unfold a great deal that had better be folded up again and buried straightway, or cremated. The subject is one that will not lose by being kept, and, with that note upon it, I leave it for another and fitting occasion. It is sufficient now if I have shown that the Medical Defence Association has a raison d'ctre, and that it bases its claim for public and professional support on the principle that that which is nearest to absolute justice is also nearest to public morality, enlightenment, and security.

The Origin of Kerosene.—A Russian paper called Nedicla ("The Week") gives the following extraordinary account of a religious prejudice which has grown up in one of the most ignorant rural districts of Russia:—"The farmers in the district of Kabilianki (Government of Poltava) have commenced to use kerosene lamps in lieu of the tallow candles or thin laths of pine wood which they had been in the habit of using. This innovation displeased their spiritual shepherd. He, therefore, preached at his church that it was unlawful for an Orthodox Greek Catholic to light his house with this liquid. This sort of oil, he said, comes from the decomposed part of Satan, who had been confined to rot beneath the mounts of Caucasus since he rebelled against the heavenly powers. His parishioners listened to his wise expostulation, and banished the ungodly lamps from their houses." This remarkable story must be accepted as true, for it must be remembered that the Russian censor would never permit such remarks to circulate as pleasantries.

DISEASES OF CHILDREN.

WE are all acquainted with Shakespeare's division of man's life into seven ages, but there are certain well-marked physico-mental stages in which there is not only special liability to special disease, but a great modification of the general manifestations of deranged bodily action. Childhood is one such period, and to comprehend properly its diseases it is necessary to understand what the special characteristics of this period are. The young infant comes into the world in a most immature and helpless state: all its powers are in embryo; in point of mere size what vast changes have to be accomplished! and if in correlation with the physical the mental also be taken into account, the ultimate result is most marvellous.

It is then a period of active growth—mere increase in size; but with this there is also improvement in structure, the various organs gradually reaching their highest perfection. Some of the organs remain in a more or less incomplete development for many years, and their functions are consequently in abeyance, notably the generative system; and when this change does come how much it alters the mental nature! The child, like the adult, has to make up for its waste in daily exertion, but in addition has to increase enormously in bulk, so that the ingestion of food must be in larger quantity or much improved quality. The assimilative powers are very active, so that large stores of easilytransformed material are placed in those regions where growth is most active, and as this process is cellular, such deposits are very rich in eells. This may in some measure account for the great frequency and rapid course of inflammatory action in children. There is constant change and cell-growth, and it only requires a morbid influence to turn all this activity into a morbid channel.

For some considerable time the infant is without language, and even when it commences to show signs of acquiring this indispensable means of intercommunication, it is long before it can be so used as to be really serviceable, and here we meet with one of the greatest difficulties in very young ehildren—that of being unable to gain any information verbally, and having to depend solely on external signs. Still we must not forget that such signs are objective, and only assumed when some sufficient cause exists, the power of disguising or imitating diseased action being in abeyance; however, the signs are few, and are common, at any rate in the infant, to a variety of different states. In such cases the power of observation, earefully exercised, must be brought to bear, great attention being paid to all secretions which are easily examined; and the physical signs yielded by percussion and auscultation, &c., are not to be neglected, but will yield as rich and reliable a harvest here as in the case of adults. But perhaps it is on the mental side that we meet with the most serious complications and conditions which influence unfavourably diseased action, and so often render our efforts unavailing. During the whole of child-hood the nervous system is in a state of great activity, and so liable to be easily thrown out of working gear, and then influencing the processes of growth and nutrition most unfavourably.

The nervous system is the great connecting-link which binds all the various organs into a close working confederacy, co-ordinating all the various movements and functions so as to render them subservient to the wellbeing of the economy, and securing orderly and well-balanced results. It is the grand centre of all consciousness, the seat of sensation, and the great source from which issue all those mandates of the will which, through the muscular system, result in our voluntary movements: the home of thought and those feelings which bind us together socially. But it must not be forgotten that this system, like the body itself, only acquires its full powers by education and exercise, and during childhood this is taking place. Moreover, there is nothing to balance this tendency to over-action in early stages of development; the cares of life, results of education, sobering influences of contact with real life are, of conrse, absent-can only come as a result of after discipline and training. So it happens that the child is unable to state with precision the exact seat of pain or the feelings which oppress, partly because it is not fully versed in the art of using the currency of language, and also

because it is not sufficiently educated to direct the attention to one thing and fix it thereon. Finding this difficulty, there is apt to be great restlessness and excitability: the mind eannot be fixed long on one point, and any attempt to do so only results in disorderly movements in the mental sphere. For these reasons the statements of older children must be received with caution.

Having thus far cleared our ground, it will be necessary to consider briefly some of the more common diseases of children, and principally with regard to treatment.

Fits are a most common form of diseased action in children, and result from that very predominance of the nervous system of which I have spoken. In aente fevers the commencement in adults is invariably by shivering, but in young children this is often absent, and a convulsion or fit takes its place. This, therefore, will always lead to care in the diagnosis of fits. A fit, or even snecession, in a child otherwise healthy, especially if accompanied by sickness and general disturbance of health, may be looked upon as probably ushering in searlet fever or some acute specific and disease, and this will be confirmed on learning that any infectious disease is prevalent. There are two kinds of convulsions—clonic and tonic. In the clonic form there is constantly repeated alternation of rigidity and relaxation, the limbs and body being often jerked about, hands clenched, and face distorted; in the tonic there is a fixed and prolonged contraction, so that the body and limbs become rigid and firm, and when they relax the convulsion ceases, or there may be some few clonic spasms. The first kind are illustrated by the general convulsions of children; the second is seen in its typical form as an epileptie fit.

These general convulsions may be due to various causes, and sometimes the exciting causes may be very slight or impossible to determine. Often they seem to rnn in families, and are often due to bad management, such as bad feeding, improper attention to state of bowels, or fright. Sometimes the presence of worms may be the offending agent. In such eases always commence with a purgative and have the stools examined for worms; often a free action of the bowels will effect a great improvement. If worms should be found, take means to get rid of them; if the small white, then one or two injections of guassia and salt (5 j. to Oss.), or a solution of tineture of perchloride of iron (m xxv. to 5 v. aquæ). If the round worm, a dose or two of santonin, followed the next morning by an aperient. Take great care that anything wrong in the feeding should be remedied, that sufficient quantity, at proper intervals, and of good quality should be insisted on, remembering also that over-feeding is very harmful. If ordinary measures such as these fail, recourse should be had to small and frequently repeated doses of bromide of potassium, which will often act in a most rapid manner, checking the fits almost immediately, and then it is well to keep the child for some little time under its influence.

The tonie form is seen in that form of epilepsy called "petit mal," in which often the attack is seareely noticed. The child is talking or playing, when suddenly it ceases, turns very pale, appears about to faint, and then almost instantly recovers itself, and all this may occur so rapidly as only to be noticed by a careful observer, or, if seen by the friends, it is regarded as faintness induced by the weather or some such trifling cause, and it is only when frequently repeated that they seek advice. The grave importance of these attacks, however, lies in the serious and gradually increasing mental impairment which they bring about unless cured. Bromide of potash is here the remedy which will yield the best results.

Of those acute specific fevers which seem almost a part and parcel of childhood's trombles I need not say much. Small-pox is so infrequent through the compulsory use of vaccination that it is rarely seen; searlet fever and measles are both distinet; the bright red rash with sore throat in the former, the crescentic, often dark-coloured rash in the latter with a history of running at the eyes and nose. These diseases are, however, often very serions in their after effects—such as dropsy after scarlet fever, owing to inflammatory action in the kidneys, with albumen in the urine, and which is well treated by the administration of tincture of perchloride of iron in fairly large doses, which may be combined with acctate of potash, and the free use of purgatives. Deafness is another untoward result of either disease, and

ometimes is incurable, at others by special treatment much may be done, and often demands the use of special instruents or apparatus. Enlarged glands about the neck are renerally benefited by the outward application of iodine, odide of lead ointment, and the internal administration of od-liver oil and syrup of iodide of iron or Parrish's hemicalfood. Ophthalmia, ulcers of the cornea, and weakness of sight may follow; here the same general treatment as n the former case will be adopted, and some slightly stimulating lotion applied to the eye, alum or sulphate of sinc (gr.iv. togr. viij. ad \(\frac{1}{2}\)j.) with some vin. opii (\(\frac{1}{2}\)ss. to \(\frac{3}{2}\)j.), are being taken in all cases of ulceration never to use lead lotion, for this is apt to leave a solid deposit, and so permanently interfere with the sight.

Whilst on this subject of fevers, it is well to be aware of the fact that from some slight exposure to cold children may suffer from severe fever, the temperature reaching 102° to 103° Fahr., the pulse being very rapid at 160 or more, the tongue furred with white, the papillæ standing prominently out as red spots, the urine loaded with lithates, all appetite gone, bowels confined, and perhaps some abdominal pain, and yet in a day or two the child will be well again. Sometimes it is impossible to say whether it is not a case of commencing scarlet or other fever, and often gives rise to some anxiety. The treatment is very simple. Open the bowels, give some antipyrescial agent, such as sp. æth. nitrosi, or the

liquor ammoniæ acetatis.

Infantile diarrhœa is often a very difficult complaint to treat. It is often due to improper feeding. The child is fed on milk from a feeding-bottle, and this not being properly eleansed, undergoes decomposition, and favours a similar change in any fresh milk; or it may be that summer and autumnal diarrhea which is more or less of an epidemic nature. Sickness often complicates this state, and renders it almost impossible to administer either food or medicine. In such a case the best way to arrest the diarrhœa is to give a small enema of starch and opium (5 ij. c. tr. opii m. x.m xv.). A larger amount would only aggravate the mischief. Where there is no sickness in young children the old aromatic confection, with or without some pulv. cretæ. If a moderate amount of sickness be present feed with equal parts of aq. calcis and milk in very small quantities frequently M.R.C.S. repeated.

(To be continued.)

Current Opinion.

THE PHARMACEUTICAL COUNCIL v. THE LONDON AND PROVINCIAL SUPPLY ASSOCIATION.—The Liverpool Mercury of April 24, and the Sheffield Telegraph of the same date, both contained the following comments on the above case:—Co-operation has had a severe blow dealt at it by the Lord Chief Justice of England this morning. In no department has it done more for its customers than in its pharmaceutical section. A chemist is always allowed to charge fancy prices for his goods. "The Stores" have in some cases reduced the cost of drugs 75 per cent. They began at last to touch the chemist very closely indeed, and the Pharmaceutical Society at length raised the point of law whether an association of unqualified traders had the right to sell drugs by appointing a properly qualified assistant to dispense them. To-day judgment was given in the Court of Queen's Bench. It goes dead against the right of co-operative societies to sell under any arrangement, however secure so far as the public are concerned, the articles mentioned in the Pharmacopæia. Co-operative druggists, in a word, are utterly illegal. The case will certainly be taken to the House of Lords. I happen to know that the defendant in this case was not fighting for himself. His defence was paid for by the other supply associations, and he will have plenty of funds to continue the fight. Should the House of Lords, however, uphold the decision of the Court of Queen's Bonch, as it is very likely to do, there will be no more drugs to be had from the co-operative stores. that we shall be driven back upon the old prices, but the co-operative societies will have to set up their dispenser in

business on his own account, and he will not be able to afford to sell without a profit. It seems a little hard that the public may not by association obtain their drugs at wholesale prices. But so stands the law, and there is no

present chance of its being altered.

Now is the time for a cheap druggist to start. Tradesmen in other lines of business are already competing with the stores. Only last night I received from a well-known firm a list of prices for groceries and cutlery at ready money which compared to an advantage with those of the Civil Service Supply Association. The difficulty in regard to drugs is that the majority of people will not take cheap medicines. They do not mind forgetting to pay the doctor, and they will grumble if his fees are high; but a sixpenny medicine they look upon as a fraud. They seem to delight in the luxury of paying high prices for getting well. So chemists are positively encouraged to make rapid fortunes, and to retire at an age when other men are in the midst of a struggle. A London chemist in a fine neighbourhood can be pretty certain of a very fair fortune in 10 or 12 years, and, as the people like high prices, why should he object to charge them? Medicine is the one thing the consumption of which is little affected by its cost.

The Eastern Morning News (of Hull, April 25) asks, And is this law? It may be law, for the Queen's Bench so regards it, and the only opinion on the other side is that of the County Court Judge of the pleasant district of Bloomsbury. It very likely is law, because it is so absurd and so needless. But it is deplorably unjust. From the nature of the thing it is impossible that every member of a cooperative store should be a chemist or druggist on the register of the Pharmaceutical Society. The co-operators, therefore, place in command of their drug business a qualified dispenser. The public loses nothing as to security. It gains something in the way of cheapness. But the Pharmaceutical Society naturally regards the question in its own interest. Co-operative chemistry is cheap ehemistry; the ordinary retailer sells very dear indeed. It becomes, therefore, a matter of severe competition. The co-operators are, therefore, brought in a corporation before the courts. When the case was argued in the County Court the judge took a common-sense view of the matter. It did not appear to him that the public suffered if the dispenser of drugs, the manager of the co-operative druggists' business, was a qualified man. But the Court of Queen's Bench has reversed Unless a co-operative society is composed this decision. wholly of qualified pharmaceutical chemists (who would not ex necessitate rei want to co-operate) no drugs can be sold by it. This is the law as declared by the Bench. It is law, but it is absurd.

It may be argued that the chemists have submitted to a system which at the outset of their lives cost them money and time. They have not the free right to trade. They are a privileged class to whom some protection is due, because for the public benefit they have had to undergo a course of necessary training. It is not right that they should have their work usurped for them by a body of miscellaneous gentlemen, who have made no sacrifices. The reply is that the chemists are kept under certain restrictions because no man has a moral right to run the risk of doing things in ignorance which may lead to the poisoning of the community. They are entitled only to the protection which is due to the community. So long as drugs are administered and dispensed by qualified men, it matters not who profits by the sale. The need is for a properly qualified man to dispense the drugs—that, and no more; and that the co-operative societies grant. We say that there is no reason in public policy why the law should interfere to give the country dear drugs. It is to be hoped, therefore, that the House of Lords will reverse on grounds of policy this most mischievous decision, which, for no public good, destroys a public right to buy in the cheapest market.

The Medical Press and Circular (April 30) says:—There can be no doubt that the charges which ehemists make for dispensing medicines are often much greater than they should be, but that is no reason why the proprietors of cooperative stores should add poisons and drugs to the other multifarious articles they are in the habit of selling. Were this practice once allowed, even the "duly-qualified share-holder," or "assistant," might be conspicuous by his absence, while the facilities for purchasing poisons would be certainly

greater at these stores than they are at the shop of the pharmaceutical ehemist. It would, however, be advisable if chemists took a hint from this attempt of the co-operative companies to sell drugs, and to earry on a trade which, for the good of the community, should be always a specialty conducted by duly-qualified persons, and apart from any other kind of business. By making their charges more moderate, they would still realise a good profit, while they would increase their returns, conciliate the public, and give no excuse for the trade passing into other hands.

THE UNRESTRICTED SALE OF PATENT MEDICINES.—Under the title of "Infanticide Made Easy," the Examiner remarks that few, save medical practitioners or chemists in poor and populous localities, have any idea of the extent to which the pernicious practice of the opium-drugging of infants prevails in this country. Chiefly predominant in the factory and colliery districts, it goes hand in-hand with poverty, dirt, and vice, and is a constant factor of excessive infantine mortality. Nor is the custom confined to the manufacturing towns, for the puffing of quack "cordials," "teething syrups," &c., and the facility with which they may be purchased, have combined to diffuse their use throughout the country generally. In some agricultural districts, indeedespecially in the fenny parts of the Eastern Counties—the drugging of infants is universal. The high death-rate of young children in these districts attracted the attention of the Privy Council some years ago, and in the report which was issued on the subject it was asserted that "in the marshland there was not a labourer's house in which the bottle of opiate was not to be seen, and not a child but who got it in some form.

The most notorious, perhaps, of these children's opiates is "Godfrey's Cordial;" but their number is legion and their names—"clixirs," "carminatives," "preservatives," and so on—innumerable; one, we believe, is suggestively termed "Children's Quietness," and another, which has lately figured in the Coroner's Court, is with ironical pleasantry entitled "The Infant's Friend." Nevertheless, they are practically all alike, for one and all contain opium, and therefore one and all are dangerous. If there is one drug which, more than another, requires care in its administration to young children, it is opium. So lethal is it to them that two drops only of laudanum—a dose absolutely inappreciable to an adult—have killed an infant, and experienced medical men avoid, if possible, its use entirely, or give it only on compulsion and with the greatest circumspection.

On the sale of such poisons as prussic acid and arsenic the Legislature has placed very proper restrictions. Now, deadly as such poisons may be to the adult, who is supposed to be able to take care of himself, they are not relatively more fatal than is opium to the wholly helpless and dependent infant; nevertheless the law, which imposes a restraint on the vending of the former, positively facilitates the retailing to the ignorant and vicious of opiates avowedly intended for drugging young children. The following is the process by which a so-called patent medicine of this class may be brought out-it requires few brains and little capital. An individual, of any or no occupation, whom we will call Smith, thinks it will "pay" to start a sleeping syrup. He forthwith mixes together some treacle, and, to give a "hoeus-poeus" flavour to his concoction, any infusion or decoetion he likes, and doses the mixture with laudanum "to taste," as the cookery books say. He next purchases some patent medicine stamps, which he procures at the Inland Revenue Office much as ordinary beings buy postage stamps: he then labels his stuff "Smith's Infant's Quietus," sticks on the Government stamps, and has produced a patent medicine as dangerous to the sucklings for whom it is intended as prussic acid to the adult, but which every huckster who takes out a license can hawk about the country without let or hindrance.

It is not our intention to dwell upon the motives which prompt this wholesa'e drugging of infants; they may all be referred either to ignorance, to laziness, or to vice. Not unfrequently it happens that a credulous mother, deluded by the putting advertisements of some quack opiate, honestly believes that she is doing good to her child. More often the drugging practice is due to the indolence of a slipshod mother or careless nurse, who finds it easier to dose

a crying child with the opiate than to soothe him with the food or modicum of attention which he really requires. Nor is this danger confined to the children of the poor. The apothegm that a lucky child is born with a silver spoon in its mouth may be considerably qualified by what is put in the spoon. Godfrey's Cordial thus administered is none the less narcotic, and a lazy attendant may surreptitiously drug the fretful son and heir as readily as does the peasant her squalling bantling.

Motives, too, there are of darker dye, born sometimes of despair, but oftener the outcome of degradation, vice, and crime. The bastard of the factory town is ushered into the world with the fundamental disadvantage of not being wanted there, and there is no record on earth which may tell how often his speedy exit from the stage of life is expedited by a not unintentional dose of the too familiar

"cordial."

We are well aware that to deal thoroughly with the vexed question of infantine mortality is a social problem which lies beyond the direct power of the State, and which can be solved only by the gradual improvement of the masses. Still we think that in this matter of opium-drugging the intervention of the Legislature is much needed. It is not for us to discuss the measures which might with greatest advantage be taken, but we believe that the restriction of the sale of these narcotic syrups to bonâ fide pharmaceutical chemists would do much, while the prohibition, under a penalty, of the retail of opiates for administration to children under one year of age, save by direction of a qualified medical practitioner, would if feasible, effect still more to check this detestable euthanasia. The former of these suggestions might readily be carried out, for, under the Pharmacy Act, the sale of preparations of opium or of poppies is limited to registered chemists, but the simple process of sticking on a Government patent-medicine stamp at once exempts these syrups, which, as we have shown, may then be sold by any licensed pedlar, and are the eause of more opium-poisoning than all the other preparations of that drug combined. Thus we have the glaring anomaly of Justice—truly blind—with one hand restraining the abuse of poisons, while with the other infanticide is made easy.

Medical Gleanings.

Poisonous Liniments.—Poisonous medicines for external use are not infrequently swallowed by mistake or intentionally. To avoid all serious consequences a writer in the Western Lancet suggests that in all cases where very poisonous substances are prescribed for external use a sufficient amount of some promptly emetic substance should be added. Tartar emetic, zine sulphate, ipecacuanha, and apomorphia are suggested for this purpose.

TAPEWORM IN CUCUMBERS.—According to several of our American medical contemporaries, Dr. Leidy, of Philadelphia, has announced the discovery that cucumbers are liable to be infested with tapeworm. At a meeting of the Philadelphia Academy of Sciences he exhibited a specimen of tapeworm taken from the inside of a large cucumber. It is said to have had all the characteristics of a true tapeworm, but belonged to an unknown species, the peculiarity being that the ovaries containing the round yellow eggs were confined to the anterior extremity of the segment.

DEFRAUDING HOMGOPATHS.—In a paper lately read before the Homgopathic Pharmaceutic Association Mr. J. C. Thompson, of Liverpool, stated that many unprincipled persons, themselves ignorant of homgopathy, and not believing in it, sell under the disguise of pilules and tinetures, medicines often most inaccurately prepared, and, what is worse, simply sugar and spirits of wine, labelled according to the medicine asked for, but containing no medicine whatever. Medical men have repeatedly found bottles purchased by their patients, and labelled of such a potency as in fact does not exist. The not infrequent applications to homgopathic chemists for labels and unmedicated sugar pilules, but no medicine, is another strong proof of the deception carried on at the expense of homgopathy.

THE REVENUE ACCOUNT of the British Medical Associatin for 1878 shows a clear profit of 769l. 16s. 9d. The secriptions for the year amount to over 8,000l. The tor of the journal (Mr. Ernest Hart) receives 500l., and 177l. was paid to contributors. The sum of 300l. was paid is scientific grants.

CASTOR OIL.—"CHILDREN CRY FOR IT."—Surgeon-Major Strcke, in a Vienna medical journal, has stated that by 1 xing with castor oil as much raw sugar as will convert the toole into a thick muddy consistence (about three parts of spar to one of oil is necessary), flavouring with a little chamon or other spice, children will swallow the medicine cerly. "They will struggle," he says, "for the favour of lking the spoon." The dose for adults prepared in this by is so great that he recommends in preference the additute of a little compound liquorice powder to the oil (about the totwo), to make boluses, which are easily swallowed.

PAYING PATIENTS.—The managers of the London Homocophic Hospital have resolved, for at least one year, to try the experiment of setting apart a few beds for paying tients. At a meeting of the Governors the proposal was rally opposed by Dr. Hamilton, on the ground that the Ispital was supported by subscriptions as a charitable institution, but Dr. Bayes pointed out that the adoption of the scheme would really be an extension of the charity, and the treasurer, Captain Vaughan Morgan, said the Hospital culd not support its present number of free beds without the aid of some paying patients. The Hospital had but just the out of debt, and it was very desirable that thus improved andition should continue.

GONORRHEA.—Bauer's method of treating gonorrhea—sed upon the theory that it is purely a local disease, the otecting layer of epithelium being thrown off, and the ithelial cells converted into pus cells and discharged, iving the mucus membrane exposed—is simply the use of bland injection, which is followed by immediate relief to e pain, and usually results in a cure in about six days as llows:—

To be injected warm every three hours and retained for a w minutes.

THE WISDOM OF THE PAST.—The following are quoted the British Medical Journal from among the graduation eses, which were defended with a great display of elozence, in the fifteenth and sixteenth centuries, in Paris, at e Medical School, Rue de la Bûcherie. The answer to ch question is affirmative. Does Venus beget and expel seases? Are the plague and venerie affections of Divine igin? Is wine good for healthy individuals, as well as for valids? Ought patients, sick with fever, to prefer a fish let to a flesh diet? Has the plague been sent down from eaven? Has the moon any influence on the humours of the ody? Do mineral waters make women more fruitful? re short women more fruitful than tall women? Is wine e milk of old age? Is Aurora the friend of Venus? Can toad be begotten in a man? Is it healthy for old people put themselves into a passion? Are heroes given to ielancholy?

Quinetum.—Dr. Ainstie Hollis (British Medical Journal) emarks on the value of quinetum sulphate in cases of ague. le has tried it in about a dozen cases. In two instances it tiled, but quinine was tried subsequently with no better ffect. Sometimes it seemed to produce better results than uinine. A man with tertian ague had been under treatnent for this disease for two months without relief. One ose of 15 grains of the quinetum sulphate entirely hecked the shivering fits, and the subsequent administra-ion of three-grain doses three times daily for three weeks ured him. In another case, a youth aged 16, who had been aking six grains of quinine daily for three weeks for a uotidian fever, and under this treatment had greatly imroved, was completely cured of the disease by nine grains f quinetum sulphate in the 24 hours. Quinetum repreents the whole of the alkaloids of the Cinchona succiubra bark; it is scarcely half the price of quinine. The ulphate contains, according to Mr. Whiffen, of Battersea: uinine sulphate, 25 to 30 per cent.: cinchonidinc sulphate,

50 to 55 per cent.; cinchonine sulphate, 20 to 25 per cent. He further states that the variations of the alkaloids rarely range to the extent of 5 per cent., as above mentioned.

WATERPROOF PAPER.—Dr. W. W. Keen, surgeon to St. Mary's Hospital, Philadelphia, United States, has reported in the Philadelphia Medical and Surgical Reporter, his experiments with a preparation which he calls "waterproof paper." Having used waxed paper as a substitute for cited paper." Having used waxed paper as a substitute for oiled silk, he found it in many respects very inefficient. After various experiments he induced Messrs. Seabury & Johnson to prepare a paper dressed with a combination of rubber and paraffin. This he has found of remarkable value. As to its imperviousness, experiments proved that water would filter through oiled silk after a short time, but that not a drop would pass through the waterproof paper. In this respect it is equalled by guttapercha tissue. Heat makes it sticky at a little over 140° Fahr. Oiled silk will stand a much greater temperature without being affected, but guttapercha tissue adheres to itself at from 100° to 110°. It was found that as a covering for poultices, a heat above 115° and below 135° was necessary. Guttapercha tissue is therefore useless for such a purpose, while water-proof paper fully answers the requirements. Of course the waterproof paper is not by any means so tough as oiled silk, but it is very supple, and may be crumpled and washed into perfect pliability without injuring its qualities. The writer estimates the comparative cost as follows:—Oiled silk, 1.50; guttapercha 60, and waterproof paper 2 cents per square yard. We presume that samples may be obtained from Messrs. Seabury & Johnson's London house, 11 Jewin Crescent, E.C.

Drug-smoking.—Dr. Reginald E. Thompson has contributed to the *Practitioner* a somewhat remarkable paper on the therapeutical value of drug-smoking. The fact that asthmatic patients are relieved by smoking secret medicines, with other considerations, led him to investigate the matter. His object was to find some method of combining well-known drugs so that the smoke could be inhaled and brought into contact with the blood-vessels of the lungs. The simplest and surest method is the use of paper soaked in a weak solution of nitre, dipped afterwards into the tinctures or solutions of the drugs to be administered, and rolled into cigarettes of uniform size. The paper most suitable for the purpose was found to be Swedish filtering paper, which burnt freely and gave out but little odour. The scent of the smoke was, however, so disagreeable that it was necessary to disguise it, and the following formula represents the basis of each cigar. Swedish filtering paper, size 4 in. by $2\frac{1}{2}$ in.; nitre, $\frac{1}{4}$ gr.; tinctura tabaci (1 in 8), 10 minims; ol. anisi, $\frac{1}{8}$ minim. A solution of the drug to be experimented on was then prepared, the paper floated on the solution, dried, and cut to any required size. An eighth of a grain of opium produced effects which were too intense, and 1-64th of a grain of extract of opium was found to be sufficient for the initial dose. Cigarettes with this amount of opium were smoked by four healthy men, and in a few minutes a decided effect of dizziness was produced. Not more than half the quantity of the drug can have been retained in the lungs. Short accounts are given of nine cases in which this preparation proved useful. In the first, eleven hours' sleep were obtained by smoking half a cigarette. The author sums up the article in the following sentences: -- "The smoking of opium is especially adapted to cases of harassing cough; the topical effect of the drug is immediately obtained without any part of the dose being wasted on other tissues; moreover, this mode avoids those objectionable effects which are a bar to the use of the drug when it has to be given by the mouth into the stomach. Opium-smoking is peculiarly useful in those cases of laryngeal ulceration in which all attempts at deglutition are accompanied with extreme pain, and the topical effect of the anodyne chiefly sought."

A YOUNG Scotchman at Aldershot fell ill, and was sent to the hospital. A bath was ordered. It was brought into the chamber where the invalid lay. He looked at it hard for some time, and then he threw up his hands and bawled, "Oh, doctor, doctor, I canna drink a' that!" PRICES FOR 1879.

MINERAL WATERS.

71 PER CENT. FOR CASH. 5 PER CENT. ON QUARTERLY ACCOUNTS.

E. GALLAIS & CO., 27 MARGARET ST., REGENT ST., LONDON.

All Chemists are invited to apply for a Copy of our

Wholesale Price List of HOMŒOPATHIC MEDICINES,

Mother Tinctures, Pilules, Globules, Sugar of Milk, Medicine Chests and Cases, Glass and Cardboard Goods, and all Sundries connected with the Homœopathic Business.

W. BUTCHER & C O., Wholesale and Export Homeopathic Chemists, SPENCER PLACE, BLACKHEATH, LONDON, S.E.

STEDMAN'S TEETHING POWDERS.

1/1	size (containi	ing 9 por	vders)			8/6	per de	z.)	less usual
2/9	,,	27	27	,,			24/-	,,	}	discount.
4/6	21	71	54 216	,,	• •	• •	42/-	net.)	
21/-	2.2	11		9.9						
A	mixed	parcel	to value	78/-,	net,	at 6/6,	18/-, 39	1/-, & :	120/-	per doz.

SEIDLITZ POWDERS.

Full size, and prepared throughout with Howard's Materials. Loose, 5/6 per gross; in 1 doz. Coloured Boxes, Wrappers, &c., 6/- per doz. net.

TERMS-CASH WITH ORDER,

Manufactory, 78 East Road, LONDON, N.

MUMFORD'S PURE CRUSHED LINSEED.

PRIZE MEDALS: LONDON, 1873; PARIS, 1875.

20s., net, per cwt., Bag included; or 21s, in 1-owt. Cask; in 14-lb. and 28-lb., 22s, per cwt., delivered in London. BEST QUALITY; NO OIL EXTRACTED. Carefully cleaned and ground so as to retain the natural colour of the Seed without being heated. Special quotations for Larger Quantitics. Samples, Reports, and Analyses on application, post free.

NEWCASTLE GRANARY & STEAM MILLS, FARRINGDON ROAD, LONDON, E.C.

UNGUENTUM PETROLEI. See page 66.

SANITAS.

SANITAS.—The fluid is colourless, non-poisonous, and agreeable; it is harmless to furniture and linen, and is "THE ANITAS.—The fluid is cotourless, non-poisonous, and agreeable; it is harmless to furniture and linen, and is "THE ENEMY OF DISEASE." "SANITAS is a valuable Antiseptic and Disinfectant."—Times. "SANITAS is first favourite among Disinfectants."—Lancet.

SANITAS (**FLUID**) preserves food and prevents fever. In bottles (1st quality only) at 1s., 1s., 6d., and 2s., 6d.; in gallons at 20s. (1st quality), and 5s. (2nd quality).

(1st quality), and 5s. (2nd quality).

SANITAS DISINFECTING POWDER.—In 1 lb. tin boxes at 1s., or in bulk.

TOILET SANITAS.—As a mouth-wash; for the bath; and for all the purposes of toilet vinegars. In elegant bottles at 2s. 6d.

TOILET SANITAS SOAP embodies the healthful principles of Sanitas. In boxes of three tablets at 1s. 6d.

SANITAS TOILET AND NURSERY POWDER, in 1s. boxes. Warranted free from all mineral matters and poisons.

CAUTION—These articles may be hed of all Chemists Porfumers.

CAUTION.—These articles may be had of all Chemists, Perfumers, and (wholesale) of the Company, 57 Moorgate Street, E.C.

PAMPHLETS AND PARTICULARS FREE ON APPLICATION.

EVANS, LESCHER & EVANS,

WHOLESALE & EXPORT DRUGGISTS.

Beg to announce that owing to the RE-BUILDING OF THEIR PREMISES at BARTHOLOMEW CLOSE, E.C., they have REMOVED to Temporary Warehouses at

72 & 74 GOLDEN LANE, BARBICAN, E.C.

HOMEOPATHIC MEDICINES. E. GOULD & SON,

Chemists by Appointment to the London Homeopathic Hospital, MANUFACTURING HOMEOPATHIC CHEMISTS, Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies. For Particulars apply at 59 Moorgate Street, E.C.

SEE SEABURY & JOHNSON'S Advertisement of INDIA RUBBER POROUS AND SPREAD PLASTERS on page 125.

HAWKER'S JUJUBES. See page 5.

ANALYSED

Sold by Chemists throughout the Kingdom. FOR TERMS, ETC., APPLY TO

POPE. RITCHIR 38

Wholesale Agents to the Analysed Tea Association, 6 KING STREET, BORO, LONDON, S.E.

PURE COD LIVER OIL. See page 73.





PUBLIC BUSINESS THE OF PHARMACY.

THE reports lately issued to members of the Pharmaceutical Society and to members of the Chemists and Druggists' Trade Association might furnish topics for unlimited discussion, but it could be little more than a repetition of the comments which have occurred from time to time in the midst of the events to which those reports refer. The coincidence of so many subjects in both reports may, however, at first suggest the reflection that the pharmaceutical body must be wasting its power to some degree. But this, we think, would hardly be a sound judgment. Both societies claim that their main purpose is to promote our true interests in the wisest manner. That ten thousand thinking men will discover at least two methods of carrying out this aim in respect of almost every question which may arise may be predicted with tolcrable safety. It is, perhaps, not to be regretted, therefore, that provision should exist for enlisting the sympathies and energies of all, rather than that opposition and friction should hinder the work of either.

Pharmaceutical report opens in a somewhat plaintive 1 by appealing against the "injurious but unjust cion of having been unmindful of the trade interests of nacy." Such interests are "so important to each idual member of Council as well as to the Society ally, that such negligence would indeed be inexplicable. is a rather curious sample of the argumentum ad homibut we readily admit its force. In other words, it says: ny rate you know we are selfish men; surely that d be sufficient reason for you to trust us. But look at acts. The report goes on to tell us that the object of Pharmaceutical Society has never been to embrace ical practice" in the business of a chemist and drug-The writer puts the term "medical practice" in ind commas as if to imply that such a demand been put forward. Perhaps he would give us eference. Then in 1876, and again in 1877, resolutions passed by the Councils of those years announcing the tion to defend counter practice if circumstances should ant. The Council has even gone beyond this. A corndence between the solicitors of the Pharmaceutical Apothecaries' Societies had taken place, and this with two resolutions previously alluded to convinces the cil "that the best interests of the members of the naceutical Society have been promoted, and the honour e Society upheld, and that in due time this will be who have been loud in their nciation." These martyred saints addressing thems to posterity have, we fear, just overstepped the suby for which they pose. The complaint against them ot that they passed resolutions, but that they abandoned when the time came to put them in force. They ned as a body to subscribe a single shilling towards the ce of a member who was prosecuted by the Apothes' Society for giving a gargle for a simulated sore

e report subsequently refers to the prosecution of the on and Provincial Supply Association, to the Museum, ol, and Examination arrangements of the Society, to the sed strengthening of the weak points in the Pharmacy to the Dental Practitioners and the Weights and wres Acts, to the medical bills now before Parliament, to the Benevolent Fund. The financial statement is the usual condition of prosperity. The Society has erve of 20,000*l.*, and the 1878 accounts show a profit of ditional 1,200*l.*

e report of the Executive Committee of the Chemists Oruggists' Trade Association records concisely the trials inal victory in the defence of counter practice. Oppory is taken to explain how the Association came to d the action against Mr. Wiggins. The action of the ciation in reference to the Sale of Food and Drugs Act, Dentists Act, and the medical bills of 1878 and 1879 is lescribed. The appeal to the trade for special funds to ad actions for counter practice brought in 1,645l., but plication to the Council of the Pharmaceutical Society ssistance in the same direction "did not meet with the rable consideration of the Council." The Association, re told, now numbers 4,346 members. A balance in is reported of nearly 900l., and the law costs during vear ending April 18, 1879, amounted to 8411. 14s. 6d.; he financial statement does not explain, as we hoped it t, the total costs in the Shepperley case, nor how much een or will be repaid on that account by the prosecutors. ach a publication would not be a breach of legal ette, we think it would be read with interest by many ists and druggists. The law expenses of the Pharmacal Society in 1878 amounted to 2321. 15s. 3d.

ILLEGITIMATE PHARMACY.

THE decision of the Court of Queen's Bench against the London and Provincial Supply Association (Limited) is one which will not be reversed without extreme difficulty. The sale of poisons by a limited company not qualified to deal in them seems to be, on the face of the matter, just as illegal as if they were sold by an ordinary individual. But there were two chances on which the company depended. First they placed their drug department under the charge of a qualified man and claimed that this proceeding rendered them secure. The judge of the Bloomsbury County Court accepted that defence and ruled in favour of the company. That this was a very weak interpretation of the Pharmacy Act was quite obvious to every one who was familiar with its provisions, for nothing is plainer than that the law demands that the proprietor or proprietors of a business shall be qualified, and makes no stipulations whatever about the assistants. When the case came on, on appeal, in the Court of Queen's Beneh, Mr. Wills, who appeared for the company, abandoned without ceremony such a fragile defence, and raised a much more subtle and dangerous barrier against the due enforcement of the law. He said this Pharmacy Aet applies only to "persons," and does not touch corporate bodies. When the law was made the latter were not thought of. If it was desirable now to include them in the provisions of the Pharmacy Act it would be necessary to go to Parliament for a new law. With somewhat injudicial impulsiveness the Lord Chief Justice seemed disposed to agree with this somewhat fantastic plea. The Attorney-General asked for leave to appeal, and his application led to a re-opening of the argument. An adjournment gave the judges time to examine the Pharmacy Act more closely, and by the time that judgment was to be given both the Lord Chief Justice and Mr. Justice Mellor had arrived at the conclusion that the true interpretation of the Pharmacy Act is not merely that certain qualified persons are permitted to dispense and sell poisons, but that no one whosoever except such persons may exercise that occupation. If a corporate body be necessarily incapable of fulfilling the requirements stipulated for by the Pharmacy Act as essential to qualification, why then, as the Attorney-General said, so much the worse for the corporate

It seems probable that the case is not yet at an end, but, as we have already said, there is not much chance of a reversal of the present decision. The old defence of a qualified assistant will certainly not be repeated; it is difficult to suppose that any new substantial technical flaw in the Pharmacy Aet can be discovered, and the plea that the Act leaves corporate bodies to do whateverseems good in their own eyes has been so thoroughly examined and answered that we can hardly anticipate a long life for it when it comes before the Court of Appeal.

How does the decision now arrived at affect dispensing in co-operative stores? First of all it must be understood that the only dispensing or sale of medicines which is forbidden is that of poisons. The Tottenham Court Road Company, for example, may still go on dispensing many prescriptions, and selling many drugs; but they may not (at least when the existing judgment is finally established) dispense any prescription containing opium or any of its preparations, prussic acid, strychnine, cantharides, or any of the articles named in the schedule of the Pharmacy Act. Practically, of course, this would so hamper their dispensing business as to annihilate it. Exactly the same check would be put on all the other stores in the country if it could be shown that they do in a legal sense "keep open shop." But many stores adopt in some form or other the ticket system, and

they would, of course, claim that consequently they do not keep open shop. Whether this technicality would secure them is a question for lawyers to dispute about; but if it be true, as reported, that many of them have united to support the defendant in the case immediately before the Court, it is evident that they do not depend with entire confidence on their flual line of fortifications. We trust that when the present case is entirely settled the greater issue will be at once publicly raised. A co-operative store ticket may be possessed by one person and lent to and used by a million. Whether with that fact in view the stores can maiutain that they do not keep open shop is, in our opiniou, very doubtful. But however that may be it cannot be too widely known, as the recent trial has proved, that if a company or a co-operative society is outside the operation of the Pharmacy Act and not subject to its penalties, the public is so far quite outside of the protection which that Act was intended to give. Such societies are under no sort of obligation to employ qualified assistants or to have a qualified chemist on the premises at all.

BUYING SPIRITS BY WEIGHT.

THE San Francisco Journal of Commerce states that the Germaus have been agitating for a weight instead of a measure system for the sale of spirits. The difficulty in finding a reliable method of weighing has been successfully overcome, but it was resolved not to advise any change unless a similar change was adopted by other countries. A year ago we mentioned the advantages of the proposed system. Spirit decreases in volume 2 per cent. between the temperatures of a hot summer day and a frosty day in January. We buy it by measure and sell it by weight at least in wholesale quantities. By so doing we may lose two gallons in every 100. We do not imagine that the customary method of transacting sales and purchases of spirit will be easily changed, but it is a subject worthy of the consideration of pharmacists.

ARSENICAL WALL PAPERS.

THE efforts made by Mr. Henry Carr, C.E., to attract attention to the arsenical poisoning question are beginning to bear fruit. A paper was read before the Medical Society of London last month by Mr. Jabez Hogg on "Arsenical Wall Papers and their Evil Results." The discussion which followed indicated a strong disposition towards legislative prohibition of such dangerous companions. Some of the manufacturers of wall papers have now announced that they will absolutely cease to use arsenical pigments, and Mr. Hogg remarked that there is no need whatever to use a colour which necessitates the introduction of arsenic. A Committee of the Medical Society has been formed with the object of formulating a Bill which may check so much insidious arsenical poisoning.

AMERICAN IMPORTS OF DRUGS.

WE have received from Mr. Daniel C. Robbius a review of the drug trade of New York for the year 1878, which contains some interesting facts. The author says that the drug trade for the year "shared in the general improvement in commercial affairs." Although the officially recorded imports, as far as ascertained, indicated some slight decrease, he thinks that this is sufficiently balanced by an increased domestic production of crude materials, chemicals, &c.

"Until a recent period, our supplies of the following important chemicals were obtained entirely from Europe, but now cream of tartar, tartaric, citric, and earbolic acids,

Rochelle salts, and bicarbonate of soda are largely manufactured here. Our borax mines in Nevada supply the entire home demand for crude and refined borax salt, and very large quantities are exported. Our quicksilver mines on the Pacific coast yield largely, and this important metal, of somuch use in medication, and in the arts as well as in the production of the precious metals, has been largely exported to Mexico and China. Our export for the year is computed at 2,645,0397."

The imported drug which yields the largest customs revenue is liquorice paste. This article pays a specific duty of 10c. per pound, and is largely consumed in the tobacco manufacture. The importation of the paste is, however, rapidly declining, while the root is being received in larger quantities, showing that home manufacture is being widely established. The importation of opium during 1878 was 207,752 lbs., a quantity rather below the average. The fluctuations in quinine are also specially noticed, and the writer advocates a reduction of the duty from 20 to 10 per cent. During last autumn he says the American makers were quite unable to meet the interior demand, and the foreign product realised as much as \$4½ on the market. A list of importations is appended to Mr. Robbins' pamphlet showing the quantities of each drug imported in 1877 and in 1878, and also the average for the past four years.

ENGLISH MEDICINES IN FRANCE.

WE are informed by Messrs. Roberts & Co., of London and Paris, that in consequence of representations made through the local authorities of Boulogne-sur-Mer, the School of Pharmacy of Paris, acting under the authority of the Government, has authorised the importation of the underuamed English medicinal specialties on payment of the duties stated:—

6.11 B			fr.	e.	
Saline Pyretic de Lamplou	igh	 	2	50	la bonteille
Sel de Fruit de Enos		 	0	75	"
Emplâtre d'Aleoek		 	2	0	piece
Pastilles de Broun		 	1	05	boite
Pastilles de Keating		 	0	75	,,
Baume d'Anis de Powel	• •	 	1	05	bouteille
Pilules de Cockle		 	1	05	boite
Huile de Condy (?)		 	0	80	bouteille
Medicaments Homeopathic	lue	 	0	50	tube

La "Chlorodyne" de Davenport étant une substance dangereuse, l'introduction n'en est pas permise en France.

CHEQUE BANK AGENCIES.

IT will be noticed that the directors of the Cheque Bank arc advertising in our pages for more chemists to act as their agents. The process devised and carried out by the managing director of this institution has gradually become a part of our financial system, and cannot fail to extend itself greatly as time goes on. The leading feature of the bank is that no cheque shall be issued until it has been paid for; hence the cheques are everywhere regarded as secure as Bank-notes. It provides the most perfect system of remitting small sums of mouey, whether as regards security, economy, or convenience. The remitter is safe, because the cheque is valueless until it has been endorsed by the person to whom it is payable; the remittee is safe, because he knows it could not have been drawn at all unless funds to at least the amount of the draft were in the possession of the bank. All that is wanted in order to extend the system is that it should be more prominently kept iu public view by a large number of respectable agents. There are already some 500 agents in this country, and a proportion of these appear to be

chaists. We believe if it became a generally-recognised that Cheque Bank cheques could always be obtained in emist's shop, the use of them would be indefinitely tiplied.

TIE MANUFACTURE OF SALICYLIC ACID.

To interest already attendant on the history of salicylic act has been emphasised, if not heightened, by the recent tall before Vice-Chancellor Bacon, the course and conclusion of which we have briefly reported in our last and current numbers. We say "briefly" in a relative sense. The tall cocupied the Court fer nearly ten days, and if reported in ull would have occupied the best part of our journal for a bar. Both sides engaged in the case volunteered to us information that our report was imperfect, an imputation which we cannot deny; but the double accusation was ital perhaps the best refutation of the implied deduction that it was also unfair.

the issue involved is easily stated. In 1860 or thereouts Professor Kolbe, of Leipsic, announced that he had covered a process for preparing synthetically the organic enpound, salicylic acid. The process by which he had ained this result was a very beautiful one in a scientific se, and his announcement excited much chemical inest. He dissolved metallic sodium in boiling carbolic rd (C₆H₆O), at the same time passing into the boiling acid stream of dry carbonic acid gas (CO2). The carbonic d, combining with the carbolic acid, yielded to a small tent basic salicylic acid (C, H,O,), in combination, of course, th sodium, and salicylic acid was prepared from this comund. Professor Kolbe at first believed that the simulneous combination of the three substances, carbolic acid, dium, and carbonic acid, was essential. About a year ter, however, he published a correction of his original atement to that effect, and announced that the sodium ight first be dissolved in carbolic acid, yielding (so he ssumed) a solution of carbolate of soda in carbolic acid, d that this solution acted on by dry carbonic acid gas ould yield a salicylate of soda, as before. So far the oduction of salicylic acid had not advanced beyond the age of scientific interest. In all probability Kolbe him-If had not dreamed of a great commercial future for his t product between 1860 and 1870, but all that time he was vestigating its properties by physiological researches. His servations convinced him that the acid was a valuable tiseptic, and this result probably induced him to consider hether some cheaper process for its production could not devised than by the preliminary solution of metallic sodium carbolic acid. The process that he thought of, and which rned out completely successful, was so simple, and, moreer, so closely allied to that which he had already adopted, at it now seems curious how he could have missed it so long. was to mix carbolic acid and caustic soda in an iron retort, eting on the combination with dry carbonic acid gas, the ixture being kept at a temperature of 183° (Centig.), the oiling-point of carbolic acid. Thus it appeared that the aployment of the costly metallic sodium was quite unneessary. All that was required was a perfectly anhydrous rbolate of soda. A patent for this process was taken out in ngland as well as in other countries in 1874, and that patent es been since worked by Dr. Von Heyden, of Dresden, rofessor Kolbe himself being interested in the business.

The valuable antiscptic properties of salicylic acid have adually become widely known, and within the last few ears it has been almost universally used in the beer anufacture, and as a preservative of milk, fruits, jams,

and other articles of food. Mr. Cyriax, representing Von Heyden's English agents, testified that his imports had risen from 20 lbs. in 1875 to over 36,000 lbs. in 1878. In 1877 a patent was also taken out in England, on behalf of Emmanuel Merck, a chemical manufacturer, of Darmstadt, which, with the addition of some claborate apparatus designed to promote the action of the carbonic acid, followed almost closely the chemical process devised by Professor Kolbe. The charge of infringement was denied pro forma, but as a matter of fact the defendants did not seriously claim any substantial difference between their process chemically and that of the plaintiff. The issue most keenly fought, the kernel of the case, was whether Professor Kolbe by his carlier publications had so far revealed the secret of the process which was afterwards patented on his behalf as to render that process unfit subject for a patent. The examination and cross-examination of the experts on both sides were mainly directed to this point. For the plaintiff Professors Odling, Attfield, Armstrong, and Frankland testified that the specification was sufficiently comprehensible, and that the discovery announced in the patent had come upon them as a surprise, although they knew the previous history of the manufacture of salicylic acid. In cross-examination they all refused to admit that in Kolbe's earlier experiments the addition of the sodium to the carbolic acid certainly produced carbolate of soda. True, Kolbe had said it did, but they maintained that the assertion was merely a hypothesis which had never been chemically proved-These refinements of subtlety added much to the length, if not to the strength, of the case for the plaintiff. Those eminent chemists were also disposed to maintain the nonexistence before 1874 of a carbolate of soda, but on this point they were no doubt defeated. Natrum phenylicum siccum was found in a German price-list of 1872, and a carbolic acid maker said he had used the salt for 30 years in the manufacture of carbolic acid. The other side, however, could not show that carbolate of soda had ever actually existed in a perfectly anhydrous condition, such as would be necessary for the production of salicylic acid, but that fact was probably only due to the absence of any demand for it in such a condition. For the defence Drs. Wright, Paul, Wanklyn, and Noel Hartley were called. These, or at least most of them, like their chemical opponents, helped to damage their case by excessive zeal. Dr. Wright was confident, not only that Dr. Kolbe's first announcement had revealed the secret patented fourteen years later, but also that Kolbe had been aware of the process during all those fourteen years. Dr. Wright was perhaps logical in his theories, but that blunt statement of a practical absurdity revealed the true weakness of the defence. Dr. Paul saw the promise and potency of the patented process in the prior publication, but it never seems to have struck him to use caustic soda instead of sodium until after Kolbe had done so. Indeed, in the Pharmaccutical Journal in January, 1875, he had referred to Kolbe's discovery as an important event of the previous year. Mr. Wanklyn coolly claimed all the merit of the discovery, whatever it might be, for himself. It is probable that Kolbe did owe to him the idea of employing sodium to act on the carbolic acid, but Mr. Wanklyn's evidence had really nothing to do with the real issue. Mr. Hartley, like Dr. Armstrong, both of whom had been assistants in Kolbe's laboratory between 1860 and 1870, admitted that the report of the patented process came on him as a

The Attorncy-General conducted the defence with the quiet strength for which he is remarkable, and his arguments were singularly ingenious. There was the chance of a technical victory; and had he gained it a chemical patent

would have been next to an impossibility. He might have proved that the specification in this instance was defective, or his quotations from chemical works might have forced the Court to declare that a disclosure of the method had accidentally occurred; but a judgment gained on any such plea would not have touched the fact, which is a matter of chemical history and of common chemical knowledge, that the commercial production of salicylic acid is due exclusively to Dr. Kolbe, and that his patented method, though developed from, is certainly not identical with, the experimental process he had devised fourteen years earlier.



Witerary Notes.

Manual of Organie Chemistry. By Hugh Clements. (London: Blackie & Son.) Pp. 8 and 283.

This little book is neatly bound, nicely printed, and has a good index. But beyond this we can find little to say in its favour. It is intended "especially for elementary, advanced, and honours students at the classes of the Science and Art Department, South Kensington." It is not pretended that a book like this is wanted, and we can find no originality of arrangement or statement which can justify its existence. If a student had at his fingers' ends all the facts given here, and had an intelligent grasp of their bearings and surroundings, he would doubtless be able to pass the Science and Art examinations; but the book seems as suited to the capacity of an elementary student as unground maize would suit a baby. Considerable knowledge is needed to keep the reader from falling into errors, which are scattered like pitfalls throughout the work. It is, moreover, an elaborate example of bad grammar.

Principles and Practice of Medicine, with a Short Account of the History of Medicine and Tables of Indian Materia Medica. By Rustomjee Naserwanjee Khory, M.D. Brux., &c. (London: Smith & Elder. Bombay and Calcutta: Thacker.) Pp. xvi. 1056.

THE greater part of the book is filled with accounts of the various diseases. Each disease is first defined; its causes, pathology, morbid anatomy, symptoms, diagnosis, prognosis, and treatment, are described scriatim. Tables are frequently introduced to throw into prominence various resemblances, differences, and details. The second part has more interest for pharmaceutical readers. We find here a table of Indian bazaar drugs, taken from Birdwood's well-known "Catalogue of the Vegetable Productions of Bombay." It gives in parallel eolumns the English and botanical name, habitat, Hindustani, Dukhni, Bengali, Mahratti, and Guzratti names, the parts used, the preparations, properties, and uses of about 140 drugs. Less than a dozen are from the mineral kingdom, as lime, alum, blue and green vitriol, nitre, sulphur, salammoniac, and the chlorides and persulphide of mercury. Leeches are the only representatives of the animal kingdom. They are called jouk in Hindustani and Dukhni, julvah in Mahratti, and jullvo in Guzratti, and are found throughout India, and in abundance at Poona, and Delhi. Fifty-three of the 140 drugs are contained in the British Pharmacopeia. Roomie mustakev, the Hindustani, and roomee mustachee, the Guzratti name of mastic, show that the drug is imported from Europe, roomie being the general title for things Roman or European. Next comes a series of prescriptions of Indian drugs, of which the following is a specimen:—"Jûndi-bedastar (castoreum), gr. vi. to xii.; pipar (long pepper), powdered, gr. vi.; ginger, powdered, gr. iii. Mix with mucilage. Divide into six pills. One to be given every three or four hours. In hysteria, flatulent colic, and spasmodic affections." One hundred and eighty three prescriptions for 117 drugs are

The interest of this series is marred by the carelessness with which it is printed. There are more than 150 gross misprints, chiefly in the Latin names of the drugs, on the 25 pages it occupies. Such an accumulation of errors would smother the most vigorous shoots of confidence the reader could possess. If errors are so common in the Latin names with which we are familiar, how can we trust the accuracy of the Hindustani and other vernacular names? Similar, but not so frequent, evidences of carelessness throw discredit on the table of Indian drugs. The value of the first and larger part of the work we leave to medical men to estimate. The table of Indian drugs and the native prescriptions are interesting features, whose value has been destroyed simply by carelessness in reading the proofs. In subsequent editions this defect will doubtless be removed.

Modern Medical Therapeutics. A Compendium of Recent Formula and Specific Therapeutical Directions, from the Practice of Eminent Contemporary Physicians, English, American, and Foreign. By George H. Napheys, A.M., M.D. (London: Baillière & Co. Philadelphia: D. G. Brinton). Pp. 608, large 8vo.

No medical works have proved more popular in the United States than the compendiums of Medical and Surgical Therapeuties by the late Dr. Napheys. The sixth edition of the first-named, re-edited in order to bring it to the level of the most recent information, is now published in London as well as in Philadelphia. The plan of the book is to avoid entirely all discussions as to causes or diagnosis of diseases, and to present simply a conspectus of the most successful modern methods of treatment. The authorities quoted are in most cases men of undoubted reputation; their formulae are given with an exposition of their reasons for the adoption of the same. The information has been gathered from many sources, published works, periodicals, and private communications. The system will be best understood by an analysis of one section. For example, under Asthma (p. 126) we have first a brief note stating the fact that medicines successful in one case may very likely fail completely in the next. Then follows the treatment recom-mended by Dr. J. M. Da Costa (Philadelphia), with formulæ for mixtures and liniment; a hypodermic injection recommended by Dr. J. G. Oliver (London), in the Practitioner, January, 1876; pills and hypodermic injection prescribed by Dr. C. Handfield Jones (London), pills by Dr. Leclerc, and eigarettes by Dr. Gallois (Paris), pills by Professor von Niemeyer (Germany), mixture by Professor Trousseau (Paris), the iodide of ethyl, and iodide of potassium treatment recently described by Professor Sée (Paris), and also various methods of treatment recommended by Dr. Hawkes Tanner (London), Dr. William M. Welch (Philadelphia), Dr. J. S. Monell (New York), and Dr. Hyde Salter (London). After these is given a "résumé of remedies," in which about 40 medicines are named, which have been recommended by the above and other authorities, with the comments suggested by a consideration of the general experience. In this edition the diseases of women are not included, the editors proposing to form of these a separate volume like the surgical cases. We notice also that skin diseases are not included in the compilation; perhaps these are regarded as surgical cases. It is impossible to avoid noticing the admirable style in which the book is printed.

Artificial Manures: their Chemical Selection and Scientific Application to Agriculture. By M. Georges Ville. Translated and edited by Wm. Crookes, F.R.S. (London: Longmans.)

In this volume Mr. Crookes has brought before English readers the work of an enthusiastic French agricultural chemist, in a translation which, though evidently close, presents all details of weights, measurements, and values in figures familiar in this country.

The author is a chemist, who, having devoted himself to experiments affecting agriculture, was provided by the Emperor Napoleon III. with a farm at Vincennes on which to work out his theories. His investigations resemble those which have been conducted by Messrs. Lawes & Gilbert on their farm at Rothamsted. In a course of fifteen lectures the theory and practice of the cultivation of crops are detailed with patient minuteness. The facts are gathered

om many sources, and are not confined to observations at ncennes. The verified results are given with exactness d in the most business-like manner; the chemical and ysiological bases on which they depend are abundantly plained; and the advice deducted from them is carefully

d distinctly given.

The necessity of scientific aids to farming is not now sputed even by the most ignorant and prejudiced. But it probably not sufficiently understood how important it is at the different requirements and the corresponding anures of various crops should be carefully distinguished. Ville calculates that thoroughly scientific farming, and e economic selection and application of mannes would onble the food produce of England. He shows by repeated amples and argument how wasteful is the attempt to farm y natural manure alone, and he aims to prove also how uch profit may be made by rightly adjusting the manner of the soil and the crop to be raised. He advocates the remation of co-operative manure companies among the transfer of all the counties of England, and he proposes and elaborates at some length schemes of combining certain industries, such as the manufacture of sugar, starch, spirit, roils, with the enlitivation of the land so as to obtain these readucts at the cheapest rates and retain the refuse for annures.

Mr. Crookes would do a service to his country if he were condense some of the most striking facts of these lectures nto a pamphlet with the object of inducing the agriculturists of England to enter upon a more extended study of the principles upon which their success and so much of the

ational wealth depend.

Nateria Medieu and Pharmacy for the Use of Medical and Pharmaceutical Students Preparing for Examination. By W. Handsel Griffiths, Ph.D., L.R.C.P.Ed., and George F. Duffy, M.D., Dublin. (Dublin: Fannin. London: Baillière.)

HE difficulty of selection which already presents itself in egard to works on materia medica ought not to be increased rithout good and sufficient reasons. It is satisfactory that he authors of this new treatise at least recognise that proosition. In the preface to this volume they have stated he object of the work, which, it should be explained, was early completed by Dr. Griffiths at the time of his lamented eath. It was then finished and generally edited by Dr. Duffy, the examiner in materia medica in the Queen's Iniversity of Ireland, and lecturer on the same subject in the Carmichael School of Medicine. Dr. Griffiths, and we resume Dr. Duffy also, consider that the study of materia ledica "proper," by which they understand its chemical nd botanical details, should be dissociated from that of herapeutics. They think that the medical student should e taught materia medica and pharmacy in the earlier part f his curriculum, but that therapeutics should be taught oncurrently with pathology and the practice of medicine. Ir. Griffiths advocated this view in the *Practitioner* in 1874, nd it has since, he tells us, been taken up by many eminent ecturers on materia medica, and he anticipates that the ledical Council will before long give effect to the suggested eform. As for pharmaceutical students, to whom he thinks is work will be also serviceable, his theory evidently is that ney had better not learn therapeutics at all.

Looking at the question from a pharmaceutical point of iew exclusively, we find it impossible to come to the contesion indicated. The ideal pharmacist of these authors, is regards his acquaintance with Materia Medica, would be, be presume, one who should be familiar with the physical and historical characteristics and all the substances used in is art, but quite ignorant of their qualities. Such a pharmacist, we fancy, would be a highly dangerous person. If the distance between the physician and the pharmacist were is wide as that which separates the architect from the ricklayer, we could appreciate the object of excluding perapeutics from his range of study. But if his work is to eanything more than mechanical, it would be as unwise it is impossible so to circumscribe his vision. And besides,

the extent that the comparative value of a substance is gnored so far is the interest in its study eliminated. The

sociation of ideas assists, rather than confuses, the emory; and it seems to us that this is especially true in

egard to Materia Medica,

In the book itself we find no feature of especial value. It is mainly a reprint of the "Pharmacopeia," with a thin line of commentary which does not venture to correct or criticise the authority it follows, and the arrangement, which aims to be systematic, has become confused by the separation of the description of a preparation from the section in which its production is detailed. There is nothing in it to compensate for the instruction which has been removed from it, and we therefore fail to see that it has succeeded in justifying its existence.

WE have received from Messrs. F. Darton & Co., scientific instrument makers, 45 St. John Street, an illustrated price list of barometers and thermometers.

The price of the "United States Dispensatory" has been reduced by the publishers (J. B. Lippincott & Co.) from $$\mathcal{S}10$$ to $$\mathcal{S}7.50$.

WE have received a copy of Richardson & Co.'s (Leicester) "Price Current for 1879." It is produced in a costly manner, and its contents are such as to ensure its permanent preservation. Besides the list of Messrs. Richardson's medical preparations, including some hundreds of formulæ for pills, it contains medical annotations on a number of recent remedies, most of these being quoted from current medical literature. There are also added some pages specially ruled for medical practitioners' memoranda.

WE HAVE received two instructive pamphlets by Mr. G. P. Pond, Pharmaceutical Chemist, of Fleet Street. One is on the "Metropolis Water Supply," the other on "Mineral Waters." Both tend to the glorification of our mnch-abused but famous old Father Thames. Mr. Pond argues in favour of increasing our supply of water from that river instead of adopting the scheme nrged by the Registrar-General of tapping the chalk strata of Kent, or the other proposals which engineers have suggested of bnilding aqueducts from Westmoreland or other places. In his second pamphlet Mr. Pond shows the dangers which may attend the unregulated consumption of certain heavily-loaded foreign waters, such as Carlsbad, and concludes that Thames water taken from the river at Kingston and filtered is a model water, that its mineral constituents give it a real value, and that it would be highly popular if it only had a foreign name!

Bankrupteies and Liquidations.

G. J. Andrews, Chemist, &c., Little St. Andrew Street, Upper St. Martin's Lanc.

THE debtor has filed a petition for liquidation, returning his liabilities at 722l. 15s., and assets 40l, the following appearing in the list of creditors:—

	£ s. d.
Whiting, Mrs., Gower Street, W.C	 384 0 0
Bastable,, 267 High Holborn	 26 10 0
Truman, -, 19 Castle Street, Oxford Street	 26 0 0
Sydney, F., Lord Mayor's Court, Guildhall	 $24 \ 10 \ 0$
Haining, A., 36 Trevor Square, Knightsbridge	 22 - 8 - 0
Osman, V., 45 Seymour Street, Portman Square	 18 10 0
Foulger & Son, Great St. Helens	 18 8 0
Board, A. S., 40 Rupert Street	 18 0 0
Anderson, —, 417 Strand	 17 11 0
Ogle, J. P., 28 Bedford Square	 17 10 0
Dunn. Mrs., Cambridge Road, Kilburn	 16 0 0
Piper, C. N., 39 Hoxton Square	 15 8 6
Snook, —, 52 Cleveland Street, Fitzroy Square	 14 0 0
Davey & Co., Park Street, Southwark	 14 0 0
Tinsley, W., Chatham	 $13 \ 15 \ 2$
Godson, -, Peckham	 13 14 0
Spronle, E. B., Drummond Street, Enston Square	 13 0 0
Purkiss, W. J., 9 Huggin Lane	 13 10 0
Winterton, C., Dover	 12 - 0 - 0
Shearn, B., 42 Store Street	 11 - 2 = 0
Cooper, H. C., Upper St. Martin's Laue	 $10 \ 12 \ 0$

A sitting was held before Mr. Registrar Murray, on April 6, for the purpose of registering the resolutions come to at the meeting of creditors for liquidation by arrangement, with Mr. E. B. Sproule, of 5 Drummond Street, Euston Square, as trustee. There was no substantial objection, and his Honour, upon the application of Mr. Ogle, registered the resolutions.

M. E. Bowker, Dyewood-grinder and Drysalter.

THE second statutory meeting of the creditors of Matthew Edmondson Bowker, of 73 Ashton Old Road, Ardwick, trading as "William Henry & Co.," dyewood-grinder and drysalter, was held on April 15 at the offices of Messrs. Simpson & Hockin, solicitors. The resolution passed at the first meeting accepting a compromise of 14s. in the pound, payable by instalments, was confirmed. Mr. E. B. Harding, accountant, was appointed trustee.

J. H. HEATH, Chemist, 445 Strand.

THE bankrupt, formerly carrying on business as above, and since of 33 Clifton Hill, commercial traveller, was adjudicated in December, 1877, and passed his examination in due course upon a statement of affairs showing debts 850*L*, and no assets. He applied for his order of discharge on April 24 in pursuance of a resolution of the creditors attributing his bankruptcy and inability to pay 10s. in the pound to circumstances for which he could not justly be held responsible. There was no objection, and Mr. Registrar Brougham granted the discharge.

JOHN WHEATER, Leeds.

A PETITION for liquidation has been filed in the Leeds County Court by John Wheater, wholesale druggist and drysalter, Dock Street; the liabilities are said to amount to nearly 15,000%. Mr. Lowrey, accountant, was appointed receiver.



THE MANUFACTURE OF SALICYLIC ACID.

In the Chancery Division of the High Court of Justice on April 23, Vice-Chancellor Bacon gave judgment in the ease of Von Heyden r. Neustadt & Co., reported in our last number.

The plaintiff is the patentee of the process for the manufacture of salicylic acid communicated to him by Professor Kolbe, of Leipsic, in 1874; the defendants sell in this country a salicylic acid manufactured by another German firm by a process which plaintiff alleges is an infringement of his own patent. Defendants reply that plaintiff's patent is invalid because its principle had been previously disclosed by Kolbe in scientific communications; they also deny that their process is an infringement of plaintiff's patent. Many scientific witnesses were called on both sides, chiefly to testify in regard to the novelty of Von Heyden's patent.

Mr. Aston, Q.C., Sir Henry Jackson, Q.C., and Mr. Macrory appeared for the plaintiff (instructed by Messrs. Van Sandau & Cumming); the Attorney-General, Mr. Everitt, and Mr. Carpmael (instructed by Messrs. Lumley & Lumley) were counsel for the defendants.

After briefly describing the case, the Vice-Chancellor said:—

The questions to be decided are of no small difficulty, involving as they do the consideration of somewhat nice and subtle questions of chemical affinities and their results. Nor is the difficulty lessened by the unavoidable necessity of employing in the solution of the questions a nomenclature which, however suitable or convenient it may be to the professors of chemical science, is unfamiliar, and, without great care and attention, is hardly intelligible to any others than such professors. To this may be added the great length of the investigation, which has occupied several days, and the conflict of evidence which has occurred in its progress.

The existence of the compound called salicylic acid had

been known long before the patent. Salicine, the chemical principle from which it is formed, had been ascertained to exist in willow bark, and in several other vegetable substances. It had been ascertained that the powerful antiseptic qualities. It is said to have been employed as a substitute for quinine, and for other medicina purposes, and it appears that it could be produced, not only from the vegetable substances I have mentioned, but, by its formation with a base of sodium, dissolved in carbolic acid by the introduction of carbonic acid. It also appears by the evidence that these operations were costly in their processes, and that their product was so small that very little use was made of it, and the knowledge of it and the practical production of it were confined chiefly if not entirely to the laboratory experiments of chemists.

In numerous treatises on chemistry and in periodical publications the methods by which salicylic acid might be produced were not unfrequently described, and several of them were known to the chemical world in or before the year 1859. In that year Herr Kolbe, a chemist, of established reputation in that science, communicated the knowledge he then possessed, in the German "Annals of Chemistry," to which, in the following year, he added a further notice of the same subject; and it is also treated of

by him in a treatise on organic chemistry. Thus the matter of Kolbe's discoveries, relating to the production of salicylic acid with a base of sodium, remained until shortly before the year 1874; and it is clear that up to that time no manufacture of salicylic acid existed, and that none of the writers on chemistry had suggested that it could be made the subject of a manufacture in the proper sense of the word. I find no trace in any part of the evidence adduced that can lead one to infer that any further progress was made, or any additional discoveries suggested by anyone, for about 14 years. Shortly before the year 1874 Kolbe made the discovery which is the foundation of a patent he then procured in Germany, and which is identically the same as that which is the subject of this action. The English patent is dated February 17, 1874. Having described the processes hitherto known, two methods are described for the production of salicylic acid. The first process is described as consisting of the heating of the solid hydrates of the alkaline earths in a closed retort of iron, or any other suitable material. The temperature is described to be such that the water, with the greater part of the excess of carbolic acid, having passed over, dry carbonic acid being conducted in a continuous stream into the contents of the retort, the formation of salicylic acid will take place. It is pointed out that the before-mentioned temperature may be increased, when the entire mass will become solid, and the operation is terminated. A second process is described, consisting of the mixture of the alkalies with the carbolic acid in a suitably open or closed vessel. Heat is to be applied, and the materials are to be maintained in a state of agitation until the mixture is entirely divested of water, and ready for further manipulation. This substance dephlegmated, that is, made as dry as possible, is then to be transferred to a retort, and treated as before described, namely, by heating it in a current of dry carbonic acid.

Defendants' witnesses say that this contains nothing that was not known to practical chemists long before its date, and that it contains an imperfect and inaccurate statement of the extent of the previous knowledge, and that the directions for the processes are insufficient; and, indeed, all that the most ingenious criticism can suggest has been directed against the sufficiency and validity of the patent. The question of novelty I will advert to hereafter, with all the attention it deserves, that being, in my judgment, the most important topic that has been discussed, since it is obvious that if there is no novelty in the invention, the patent must be declared to be invalid.

The question of the sufficiency of the specification is one merely and purely of law, and, as I conceive, of law so well settled as to render it unnecessary to refer here to the authorities which have been cited in the argument. The patent is granted upon the condition that a complete specification of the invention shall be filed in the manner prescribed; and it is not to be questioned, that if that condition be not complied with the patent is avoided, the privilege granted by it is forfeited. The specification is to be construed according to the rules of law. It is neither to

enstrued rigorously nor benignantly, but is to be read nunderstood justly and fairly. Having heard and coniced all the evidence which has been adduced, I am of p ion that the patentee has fairly and justly referred to h state of general knowledge existing at and before the a of the patent respecting the synthetical production of a ylic acid. And I am further of opinion that he has in h same paragraphs described sufficiently his invention. Tre is nothing in his descriptions of the processes that as above the most ordinary understanding of the most rnary reader. Being fairly read, it appears to me that person acquainted with the most familiar principles of hnical reaction could not fail to understand them.

or can it be reasonably or justly said, as has been argued The defendants, that the two processes described so differ ra each other as that though one of them may be good and ucient the other is defective, so that the rule unquestionb that the patentee who claims more than one invention o sits his patent if it should turn out that one of his inven-ics is not novel can be here applied. I find that although h two processes are in some respects different, each of them mode of producing the same results, that result being the i tical thing which is claimed as the invention, and the rcipal difference between them being that the first is to e erformed in one vessel, while in the second two vessels be used. No witness for the defendants has asserted the invention practised and described by the plaintiff ever been practised for the like purpose before the date is patent; no one has denied either its usefulness or its ue to the chemical or commercial public; no one has fied, excepting some trifling cavils about the phraseology, the specification fairly and distinctly expresses the subof the invention; and it is proved that any workman of rnary skill observing the instructions communicated by rspecification could not fail to produce the results there ed. So far, therefore, as the defence is rested upon r supposed insufficiency or imperfection in the specifica-, I am of opinion that it wholly fails.

ut besides this objection with which I have been dealthe defendants insist that the plaintiff's alleged invenwas not new at the date of his patent; and I proceed, thefore, now to consider that objection, which, if it could enstained, would be destructive of the patent and a comte answer to the action. Besides what Kolbe had com-pricated as the result of his experiments from 1859 to 4, it appears that the subject of salieylic acid had engaged attention of many of the professors of, and writers on, mistry; and the defendants have referred to many pubed works in support of their objection, for want of novelty

he plaintiff's patent. The learned Vice-Chancellor then quoted extracts from be's own writings in 1859 and 1860, and also passages n Kekulé, Gerhardt, and Laurent. In 1859 Kolbe and temann had remarked that salicylic acid could be proed synthetically if carbonic acid were added to carbolic lat the moment when sodium was being dissolved therein,

alicylate of soda being the result.

Ifter commenting on these extracts he continued:—It ms to be clear that none of the information communied by the several publications which I have referred to can rive the plaintiff's invention of the character of novelty; l, besides this, I cannot think that the several extracts ich have been made establish the proposition for which y have been referred to by the defendants, for, as I read m, they are at the utmost suggestions or speculations by several writers, rather as inferences which may be drawn m known facts or principles, and as guides and incentives future experiments, than as authoritative statements of ertained facts. The language in which they are expressed not that commonly employed by scientific writers in imrting new discoveries. It is wanting in that exactness ich should accompany a demonstration—they are given thout analysis or even positive assertions of proof—and y amount to little more than (to use the expression ployed upon another occasion by one of the writers in elist referred to) "an elegant theory." It would, I conve, have a most injurious effect upon the progress of ence if such hints and intimations were held to have the ect of depriving a man, who had matured and completed liscovery useful and valuable to the community, of the ward of his labours.

The novelty of the plaintiff's invention is, however, distinctly deposed to in the evidence of the plaintiff's witnesses. The defendants' witnesses, not less positively, assert the contrary; and this conflict of opinion presents one of the great difficulties I have had to encounter. A large number of witnesses has been called on each side. Most of them are men of science, and, as I doubt not, well acquainted with the subject to which their testimony is applied. But all—I say it with the utmost respect for their characters and abilities—are partisans, that is, they are persons who have been consulted by the respective parties on the matter in dispute, and have been invited especially to consider the specification and the question of novelty in the plaintiff's invention as there described with a view to this litigation.

It would answer no useful purpose to follow in detail the statements on either side. It is not because the task would be extremely laborious that I decline to undertake it, for I listened during many days to those statements, and I spent many hours in reading and considering the cvidence; but in dealing with that part of the evidence which consists of opinions, I am compelled to conclude that, with few exceptions, they are, to a great extent, speculative, and consist of deductions which the witnesses draw from their own scientific resources. They know what has been written and published; they have made experiments in their own laboratories; they reason upon the universal laws of chemical affinities; but none of them, except the plaintiff, has ever conducted, or even inspected, the actual manufacture, nor has either of them any other knowledge than such as I have stated of the manner in which the invention is practised. I am far from intimating that the opinions of such witnesses are to be disregarded or treated lightly; but I am equally disinclined to receive and adopt them as conclusive of the facts upon which alone a judgment can be based; and I must say I have been somewhat surprised at not finding in the long list of witnesses called anyone, with the exception of the plaintiff, practically acquainted with the manufacture of the article. None of the defendants have been ealled. Their absence has been commented on by the plaintiff's counsel; and although I do not find it requisite to adopt those comments, I must say that I should have been better satisfied, perhaps more usefully assisted, if I had been furnished with the evidence of persons who have, with their own hands, practised both or either of the modes of manufacturing the salicylic acid.

There are, however, facts in evidence which help to furnish safe grounds upon which the questions in dispute may be determined. The patent was granted early in 1874, and in June of that year Professor Kolbe had published an account

of his discovery in the Archiv. der Pharmacic.

Dr. Armstrong, one of the plaintiff's witnesses, and Professor Hartley, who has been called by the defendants, were pupils of Kolbe, and they studied under his tuition, and practised in his laboratories before 1874, and each of them has stated that during the period to which their practical knowledge extends the invention described in the patent was not known, and they, as well as some of the other witnesses, were surprised when they first became acquainted with it on

its publication.

A topic bearing upon the question of novelty has been introduced, which at first sight seemed to be entitled to consideration, especially having regard to the contention as to the plaintiff's production being formed by an operation upon dry carbolate of soda. It appeared that a carbolate of soda consisting of a powdery substance called dry, but not chemically dry, not wholly deprived of water, was known in commerce and was quoted in the price-list of a German manufacturing chemist under the name "natrium phenyli-cum siccatum." It was proved by one of the workmen in the manufactory of Mr. Morson, a London chemist, that he had made it before the date of the plaintiff's patent, and that it had been sold to dealers. The purpose to which it was applied was not stated, but it was suggested that it might be used in the manufacture of soap. The evidence, however, subsequently given for the defendant has shown that this fact is of no importance with reference to the questions to be decided, for it is established that the substance mentioned is not chemically dry, and one of the defendants' scientific witnesses has stated that in the course of other manufactures in which he has been engaged he produced it in large quantities, and threw it away as being useless refuse, and that from it not a grain of salicylic acid This point, therefore, I think was or could be obtained.

must be wholly disregarded.

I believe, because I am convinced by the evidence before me of the accuracy of a statement in the defence to the effect that, "salicylic acid was before the plaintiff's patent a well-known chemical substance, as indeed the plaintiff has stated in his specification, and that for it a commercial demand has comparatively recently arisen in consequence of its antiseptic and other valuable qualities for certain purposes of commerce, having become more generally known and appreciated than was formerly the case"; but I believe also upon the evidence that the appreciation of its value is justly to be ascribed to the discovery on which the invention is based, and that the knowledge of its antiseptic and other valuable qualities, and of the purposes to which it may be applied, were first communicated to the world by the publication of Herr Kolbe soon after the patent, that it was received and adopted by the scientific part and adopted by the commercial part of the public as a new and useful discovery, and this during the comparatively recent period which elapsed between 1874, the date of the plaintiff's, and 1877, when the defendants' patcht was obtained. I do not venture to speculate upon the effect which the supply in large quantities and at small cost may have had upon the demand for salicylic acid, but I cannot avoid coming to the conclusion that, but for Herr Kolbe's invention, the brewers, who are said to be the greatest consumers, would have been left to find some other way of preserving their beer from turning sour, and that medical practitioners, if they wanted salicylic acid to cure fever or rheumatism, would have been reduced to supplying themselves from wintergreen, or willow bark, or sodium, at the expensive rates at which alone it could be procured before 1874. For these reasons I am of opinion that the defence, so far as it seeks to impeach the patent on the ground of want of novelty, has wholly failed.

Another ground of defence which has been argued is, that the plaintiff has failed to prove any infringement by the defendants of his patent. The answer, no doubt, in one passage denies infringement, and asserts that the defendants' salicylic acid was not manufactured according to the plaintiff's alleged invention, or by any process similar to, or differing only colourably from, that described in the plaintiff's specification; but in another passage it is admitted that the defendants' salicylic acid is manufactured according to the specification of the defendants' patent of November, 1877. That specification proceeds, in many more words than the plaintiff has thought it expedient or necessary to employ, and occasionally by reference to certain apparatus invented by the defendants, to describe the process and the results, both of which are substantially the same as those of the plaintiff. With the defendants' apparatus, whatever may be its merits, we have nothing here to do. The results are identical, as is plainly manifest. None of the defendants' witnesses have expressed a word of doubt as to this identity, and several of the plaintiff's witnesses have proved it beyond the possibility of dispute; but I cannot refrain from observing that if the objections to the novelty of the plaintiff's invention could prevail the patent which the defendants have obtained would be in the utmost peril.

Another suggestion made on behalf of the defendants has been that the plaintiff's case is defective because he has not called Herr Kolbe as a witness. I can conceive no reason why he should have been called by the plaintiff. There is no circumstance of suspicion arising out of his absence. his sayings and doings in the field of science to which his Iabours would seem to have been devoted for many years are matters of common knowledge and common fame in the chemical world. His well-deserved reputation has been recognised by the witnesses on both sides, and several of those have become so well acquainted with all the operations of his laboratory that the defendants have had ample opportunity of eliciting any fact which they might have thought material respecting the proceedings of Herr Kolbe. One of the defendants, indeed, went so far as to express a belief that Herr Kolbe did know in 1859 or 1860 all that is claimed as an invention in 1874. Such an insinuation seems to me to be entitled to no serious attention. If he did know " he was under no obligation to disclose it: but that he should keep locked up in his breast, hidden from all the

world, from 1860 to 1874, a secret which, when disclosed would be useful to the public and a source of profit to him. self, is an improbability which it is impossible to entertain.

Upon the whole, therefore, I have come to the conclusion that the plaintiff is entitled to the exclusive use and enjoy. ment of that new manufacture, in the words of the statute, in respect of which the patent was granted, and by which among its other merits, may be reckoned that of having converted a thing which was, and but for Kolbe's discovery would have remained, almost worthless refuse, into a useful and valuable commodity, from which the whole community has derived a substantial benefit.

I am of opinion further that the defendants have infringed the plaintiff's right, and that they have done so knowingly and intentionally, although they have applied to their own manufacture names and words different from those in some respects by which the plaintiff's invention is characterised Nor is that opinion affected by the fact that the defendants have mixed up in their patent a claim to the apparatus, which they say they have invented, and which, whether it be new or useful, or valuable or not, is employed by them only for the purpose of producing those results which the plaintiff achieves by the ordinary method

of machinery.

I therefore decide that the plaintiff is entitled to a decree by which the defendants shall be restrained by injunction, during the continuance of the patent of 1874, from selling salicylic acid according to the invention mentioned in the plaintiff's specification, and from otherwise using the plaintiff's invention within these realms, and from parting with the possession otherwise than to the plaintiff, of such salicylic acid as may now be in the possession or power of the defendants, manufactured according to the invention mentioned in the plaintiff's patent within the like limits; and that by the same decree an inquiry and account must be directed in the usual form of all such profits as have been derived by the defendants from the sale here of salicylic acid manufactured according to the plaintiff's invention or only colourably differing therefrom, and that the defendants be ordered to pay to the plaintiff the amount of such profits when the same shall be ascertained, and that the defendants do pay to the plaintiff the costs of this action.

Mr. Aston: My lord, although the statement of claim asks that the salicylic acid in the possession of the defendant should be delivered up to the plaintiff, in some cases your Lordship has given the alternative that it should be destroyed. Of course, we cannot ask for the absolute delivery to us of the article in question, if they prefer that

it should be destroyed.

The Vice-Chancellor: I have nothing to do with that. You did not hear what I said. I said the defendant was not to part with it otherwise than to the plaintiff. If he and the plaintiff make terms about destroying it well and good.

Mr. Aston: If your Lordship pleases. I ask for a certifi-

The Vice-Chancellor: You must have that.

THE PHARMACEUTICAL SOCIETY v. THE LONDON AND PROVINCIAL SUPPLY ASSOCIATION (LIMITED).

JUDGMENT in this case was given in the Court of Queen's Bench on April 23. The Lord Chief Justice read both his

own judgment and that of Mr. Justice Mcllor.

In delivering his own judgment he first read the 1st and 15th sections of the Pharmacy Act, and then described the constitution of the defendant company, pointing out that William Mackness held 564 shares at 10l. each fully paid up, that six persons held five shares each, and three persons held one share each, 2l. 10s. being paid on each share. One of the holders of five shares (Henry Edward Longmore) was a registered chemist within the meaning of the Act, but none of the other shareholders were so qualified. He, with two qualified assistants, attended to the drug department, and did nothing else. These were the paid servants of the company. The question now presented itself whether the company was amenable to the penal chactments of the statute. It had been admitted that had this been an ordinary partnership the unqualified partners at least would have been subject to the penalty. It was not enough that qualified assistants should be employed. Clearly the Legislature required that the master himself should be qualified.

two parties combined to carry on the business of a groeer nd a chemist, it was not sufficient that one of them only hould be qualified. There would be nothing to insure that, the absence of the qualified partner, the other might not ke it upon himself to act in his stead, and thus the curity against fatal mistakes which the statute intended provide would be compromised. But it had been argued at, being an incorporated company, the defendants were of within the statute. The contention was that the rm "person" used in the Act could not be roperly applied to a corporate body. This objection eemed at first sight to present some difficulty, but when the urpose of the legislation was considered the difficulty did ot appear insuperable. The Attorney-General had quoted ne 14th section of Geo. IV. 7 & 8, c. 28, which provided that any statute relating to any offence punishable by indictnent or by summary conviction words used (among others) mplying one person should include several persons, and odies corporate as well as individuals, unless otherwise pecially provided, or unless the context be repugnant to uch a construction. But the proceedings under the harmacy Act were by civil action, and, therefore, that Act ould not apply here. Applying attention, therefore, to the harmacy Act itself, his Lordship thought it quite obvious hat an incorporated company came within the mischief gainst which the legislation was directed. Otherwise it would always be possible for a few persons to join together nd form a company to carry on the business of a chemist nd druggist, and thus set the statute at defiance. It could ot be supposed that the Legislature contemplated a result o entirely at variance with the purpose of the Act, or rtended that incorporated bodies should be placed on a oting different from ordinary partnerships or individuals. ossibly it had not been foreseen that joint-stock companies yould superadd the business of a chemist and druggist to nat of a grocer and provision merchant, but such a case ame within the mischief intended to be prevented. It is rue that the term "person" as used in the 1st section rould not ordinarily apply to a corporation; but the fallacy f the argument for the defence was that it did not recognise hat the prohibition was general and prevented all persons xcept those qualified from dealing in poisons or carrying on he business of a chemist and druggist. The defendants in hus infringing the law may not be liable individually—on his it is not necessary to pronounce an opinion—but in their orporate capacity they are breaking the law, and must, herefore, for this purpose be taken to be sufficiently persons within the meaning of the Act. The argument of Mr. Wills, hat corporate bodies cannot as such comply with the equirements of the Act—examination, for instance—cannot illow them openly to break the law as if they were beyond t. One of the shareholders is a qualified chemist, but he acts merely as the servant of the company, and his qualificaion cannot exonerate the other members of the company. Even if he were acting as a member of the company it would not be otherwise. So long as any of the company are disqualified the body is disqualified. A qualified chemist who should carry on a business of grocer and chemist in partnership with a grocer would be as liable to the penalty as his unqualified partner. The County Court Judge was, therefore, wrong in holding that the defendants were not liable because their business was conducted by a qualified chemist. The remaining question is whether a company is capable of being sued under the 15th section. On this point the authorities quoted by the Attorney-General seem sufficient. It has been held that, though they could not be indicted for treason or felony, or offences against the person, they can be proceeded against in a civil suit. I am, therefore, of opinion that the appeal must be allowed, the decision of the County Court Judge reversed, and judgment entered for plaintiffs.

Mr. Justice Mellor had come to a similar conclusion after considerable hesitation. For some time he had been inclined to the view that the Pharmacy Act had omitted to provide for such a case as that of the defendants'. On fuller consideration, however, he had come to think that the intention of the Legislature was to prevent the sale of poisonous drugs by all persons not qualified. The Act, after providing for the interests of all persons in business when it was passed, provided that in future all chemists and druggists should be examined and registered, and that those

only should be permitted to keep open shop for retailing, dispensing, and compounding the poisons in question. The Act absolutely excludes all other persons from that right. And the learned Judge considered that in this sense the word "person" would include natural persons and artificial persons created by incorporation. The eases cited by the Attorney-General clearly proved that an incorporated company may commit an offence either of non-feasance or of mis-feasance, and be punished for the same by indictment. He said, therefore, that in this case the offence had been committed by the defendants, and that they were liable to be punished for it.

Mr. Wills asked for leave to appeal, which the Lord Chief Justice at once granted, though he gave it, he said, with

some reluctance.

Mr. Lumley Smith urged that pending the hearing of the appeal the defendants should undertake not to continue the sale of poisons.

The Lord Chief Justice said that would assume the certainty that defendants would be defeated on appeal.

Ultimately it was agreed that the appeal should be set down without delay, the defendants undertaking that up to its hearing nothing should be dispensed by persons not qualified. The ground of this pledge, said the Lord Chief Justice, was that if defendants are out of the Act they are out of all its provisions.

A CHEMICAL SECRET.

At the Court of Queen's Bench on April 26 a rule for a new trial in the case of Fulgar v. Mills was moved for. The case had been tried before the Judge of the County Court at Petersfield, Hampshire, when the jury returned a verdict for the defendant, on the counter-elaim for 301. 3s. 9d. The plaintiff was a manufacturing chemist, at Bow, and was possessed of various recipes, and, amongst others, "for curing hams and bacon, and giving them the true flavour of Wiltshire bacon."—The Lord Chief Justice: How was that to be done?—Mr. Wharton (plaintiff's counsel) said by a composition of borax, alum, and other ingredients. Another recipe was to prevent "hoppers in bacon," and would also "preserve cheese, and keep meat generally from taint." The plaintiff elaimed 4l. 8s. 4d., which the defendant refused to pay, and brought a counter claim for 301. 3s. 9d., the value of 18 sides of bacon that had been spoiled by the trial of the process and had to be buried. Plaintiff said that the recipe had been successful in 470 cases, and that defendant was bound by the terms of the contract to have given notice to him if he could not work it.—The Court held that the process had entirely failed, and as that was a question of fact for the jury there would be no rule.

THE TRADE-MARK "LIMETTA."

On Saturday last (May 10) Vice-Chancellor Hall gave judgment in respect of an application by Messrs. Rose & Co., lime- and lemon- juice merchants, of Leith and London, to remove from the register of trade-marks the name of Messrs. Evans & Co., of Liverpool, as being entitled to the exclusive use of the word "Limetta" in connection with the lime-juice preparations. It was stated that the applicants were well known as the manufacturers of lime-juice cordial, but that the use of lime-juice, which was so valuable on board ship, was very much restricted for some time, because it would not keep. Mr. Rose had, however, succeeded in removing that objection, and took out a patent for his discovery, under which he continued to make and sell his preparations, and was still selling preparations made from the fruit Citrus limetta. In 1868, the year following that in which the sale of the lime juice prepared according to the patent commenced, there was a favourable article upon it in The Chemist and Druggist and several other journals, and it was said that Messrs. Rose had sent out hundreds of thousands of circulars, calling attention to their various preparations of lime-juice, and that they had expended 12,000% in advertising, and it was submitted that the defendants could not be permitted the exclusive use of the name under which Messrs. Rose & Co. had openly sold one of their preparations for more than five years, and that "limetta" was not a fancy word, but the botanical name of

the tree from the fruit of which both parties made their preparations.

Mr. Hastings, Q.C., and Mr. Dundas Gardner appeared in support of the application; Mr. Robinson, Q.C., and Mr.

Hardy for the defendants.

On behalf of the defendants it was argued that Messrs. Rose & Co. had notice of the original application to register by means of the advertisement in the *Trade Marks Journal*, and they should then have taken the objection to the registration within the prescribed period of three months, and that they were now too late to come to the Court by motion

to rectify the register.

The Vice-Chaneellor said the allegation of Messrs. Evans & Co. was that they had used the name of "Limetta" ever since 1870, which was two years before Messrs. Rose & Co., the plaintiffs, had adopted that name, but the evidence went to show that although the defendants had used the name on their labels before the plaintiffs, they had not made it a part of their trade-mark. No doubt the name had grown up to be a part of the title by which their lime cordial was known, but it was not registered by them till long after the plaintiffs, Rose & Co., had also adopted the word "Limetta" as applied to their rum shrub. The word "Limetta" was only used by Evans & Co. as a mode of describing their lime-juice, but it was not part of their trade-mark. His Lordship's opinion was that the application by the plaintiffs, Rose & Co., to have the name of "Limetta" expunged from the register of trade-marks must be acceded to, and he should make an order to that effect unless the parties could come to some agreement as to a modified use of the term.

COUNTER PRACTICE.

AT the Birmingham County County Court on May 13, before Mr. J. Motteram, Q.C., Judge, the case of the Society of Apotheearies, London, against James Harrison, chemist and druggist, 73 Stafford Street, to recover a penalty of 20l., on the ground that the defendant had prescribed and furnished medicine to a person, and acted thereby as an apothecary, without having obtained a certificate, as required by the Apothecaries Act, the 55th Geo. III., was re-heard. Mr. Nathan (instructed by Mr. Reeves) appeared for the plaintiffs, and Mr. Jesse Herbert (instructed by Mr. Glaisher) for the defendant. The case was investigated before his Honour in July, 1877, and was then adjourned pending the decision in the Shepperley case. The facts were, briefly, that a young woman named Julia Caddiek called at the defendant's shop on November 27, 1876, and asked defendant if he could make up something to relieve her of the weakness from which she was suffering. Defendant asked her what the weakness arose from, and she told him that it was a weakness left on her after her confinement. Defendant, she said, felt her pulse, looked at her tongue, and asked her to describe what she felt. Defendant made her up some medicine, and said it would do her good. She took a dose of it in the shop, and paid defendant a shilling for it.—Mr. Suffield, surgeon, at the previous hearing stated that the woman's symptoms were those of anæmia, which was a dangerous complaint, if not properly treated. A preparation of iron, which the defendant had given to the woman, was a proper medicine.-Mr. Nathan now asked His Honour to give judgment on the matter, stating that he believed there was practically no dispute as to what took place at Mr. Harrison's shop.—His Honour read over his notes of the evidence given at the previous investigation, and expressed a wish to have the case re-argued, and Mr. Nathan thereupon addressed His Honour at considerable length upon the law of the case. He quoted the words of Mr. Justice Cresswell in defining an apothecary as a person who professed to judge of diseases by the symptoms, and applied himself to cure the diseases by medicines; and asked His Honour to decide whether the defendant in this case had not acted in the manner indicated. Defendant felt the woman's pulse, looked at her tongue, and put such questions as he thought necessary for a diagnosis of the case, and selected a medicine which was a proper medicine, so far as it went, for the complaint. Referring to the recent judgment of Baron Pollock in the Shepperley case, he pointed out that, according to the 28th section of the Act, the business of a chemist was that of preparing, compounding, dispensing, and vending of medicines and drugs. Mr. Nathan argued that dispensing meant

weighing out or apportioning of ingredients according to quantities given, and it had nothing to do with the selection of the ingredients. For a chemist to select or prescribe medicines, he contended, was to take upon himself the duty of an apothecary. There was nothing which a regular practitioner did that the defendant did not do in this case except that he did it in his own shop instead of at the bed side of the patient.—Mr. Herbert, in reply, pointed out ir the first place, that there were certain duties which the apothecary had to perform in preparing and dispensing medicines which the chemist also had to perform, and a chemist must not be convicted for doing an act which an apothecary might do. He contended that chemists and druggists, under the words "dispensing" and "vending" had a certain amount of discretion.— His Honour said he thought it would not be denied that a ehemist had to exercise discretion. If a person asked for a dose of medicine the chemist had to exercise discretion as to the quantity to be supplied, according to the person to whom it was given.- Mr. Herbert said his friend admitted that a chemist must exercise discretion in mixing a dose, and he was prepared to accept that, and he asked his Honour to say how far that discretion might be exercised. In the Shepperley case it was shown that the chemist examined a patient, and the judge left it to the jury to say whether the discretion used was proper. In this case he asked his Honour to say that the defendant simply exercised such discretion as belonged to him, and was ancillary to the dispensing and vending of the drugs. To prescribe was to discover or diagnose a disease, and to adapt a remedy for it. The difference between what his client did and such a course was that the patient went into his shop and told him what was the matter with her, and asked for medicine for weakness. Then came the question as to what was the proper dose of medicine to give her. and how could defendant better ascertain that than by feeling her pulse? He urged that the defendant in doing this was simply exercising discretion as to the dose of medicine which he should give. It was difficult to say how far such discretion might be exercised.—His Honour asked if a chemist and druggist might do what the defendant had done, what part of an apothecary's business he might not do?—Mr. Herbert: He cannot visit, sir.—His Honour: I am not sure that an apothccary can do that as a right and prescribe. There are cases in which it is said that he cannot recover, except on a contract.—Mr. Herbert said that a chemist could not visit at the house of a patient, nor charge for advice in any way, without trespassing upon the duties of an apothecary. An apothecary might examine and discover what were the diseases of his patients, and then determine what were the proper remedies; but a chemist might not do that. He might take the statement of any person coming to him and saying what disease he had, and he might dispense medicine to him, and for that purpose he might exercise discretion as to the dose by examining the pulse. Further than that he had no right to go.—After further discussion, his Honour stated that he should defer his judgment until a day of which he would give notice to the respective parties.

CAPSICUM IN DELIRIUM TREMENS. - Mr. Bingham Crowther, of Hobart Town, describes in the Lancet two cases of delirium tremens in which tincture of capsicum proved a most effectual remedy. One man had been cured of an attack in January, 1878, by three doses of tincture of digitalis, 5iij. each, administered every four hours. On April 3 he was again admitted. The treatment that cured him before now produced no relief, and the patient seemed in great danger of death from debility. Other methods were tried without effect, and finally doses of half-a-drachm of tincture of capsicum in half-an-ounce of water were administered every three hours. His condition at once improved, and he progressed, without relapse, to recovery. A second case, which was complicated with pneumonia, was cured, though with less rapidity, by the same treatment. The effects which seem characteristic of capsicum in these cases are—1st, the tremor and agitation are removed in a few hours, and calm and prolonged sleep is obtained; 2nd, the skin is restored to its normal warmth, and perspiration takes place freely; 3rd, the pulse rapidly falls from 140 or 150 to 100, and regains its fulness and volume; 4th, the kidneys and bowels both act very freely.

Chemistry.

VANILLIN FROM OATS.

Pharmaceutical Central-halle states that Eugene lus has discovered a method of preparing vanillin, or a canee of similar properties, from the bran which is left the preparation of grits from oats. The process are to be one of oxidation.

PRESERVING MEAT.

MPLE method of preserving meat has lately been introd as a Japanese process. The meat is first placed in ng water, by which means the external albumen is ulated. The meat is then allowed to lie in water on this a layer of olive or rape oil.

LIME AS A BLASTING POWDER.

Chemiker Zeitung says that unslaked lime is being used, peially in coal mines, as an aid in certain blasting operations. After being pressed into the boring, water is added, cheapness and safety of lime recommend it, and it also the advantage that it does not add to the foulness of atmosphere.

FERRI ET QUINIÆ ET STRYCHNIÆ CITRAS.

DWARS has examined a sample of this preparation. He d that it contained 22·10 per cent. of quinine citrate ead of 24 per cent., and 42 per cent. strychnine instead per cent. The reagent used to separate the strychnine of the quinine was ammonium oxalate, quinine oxalate g almost insoluble in excess of that reagent. Pharmaisch Weekblad in Analyst.

Persulphuric Acid.

THOLLET has demonstrated the possibility of obtaining exyacid of sulphur analogous to permanganic and perprie acids, the composition of which in an anhydrous alition is S₂O₇. It may be produced by acting on dry phurous acid and oxygen by non-luminous electric sparks freat tension; or to some extent by mixing solution of trogen peroxide with concentrated sulphuric acid. At the transpart of the substitute of the substitu

ADULTERATION OF BEESWAX WITH CERESIN.

Dr. M. Buchner.*

LESIN, a purified mineral paraffin, is specifically lighter beeswax. Its specific gravity varies from '858 to '901, the that of beeswax is from '955 to '959. To detect this literation the suspected sample should be boiled for some butes in a test-tube with eoneentrated alcoholie potash HO, I part; with 90 per eent. spirit, 3 parts), and the e then left for some time in a water bath to prevent idification. Pure wax gives a clear solution; ecresin, if sent, will form an oily layer on the surface, and even er solidification may be distinguished from the saponified ss by its lighter colour.

XAMINATION OF ALUMINIUM SULPHATE FOR FREE ACID. By Wittstein.†

LUMINIUM sulphate is daily replacing in the arts the use alum, as it is richer than the latter. But it is liable to ntain free acid, which in the paper manufacture makes e product brittle. The neutral salt itself turns litmus i, so that this re-agent is inadmissible. If a solution of e salt is added to a tincture of log wood the colour will be olet red if the salt is neutral, but pale brownish yellow if e acid is present. Ultramarine strewed on the salt reains blue if the latter is neutral, but is decolorised if it

eontains free acid. But the most reliable test is the following:—The finely-powdered salt is shaken with absolute alcohol. Any free acid will be dissolved, and can be detected in the usual way.

MILK PRESERVATIVES.

Mr. G. W. WIGNER read a paper on "Milk Preservatives" before the Society of Public Analysts on April 30. The reports are the following:—

's Cream Sweetener is a liquid sold in canisters at 2s. 9d. per pint and 16s. per gallon. One pint is to be added to 16 imperial gallons, or in thundery weather a quart to the 16 gallons. It is "perfectly free from adulteration," and "assists greatly in throwing up the eream, and even increases the percentage." It contains a large proportion of glucose; the ash consists almost entirely of borax and carbonate of soda. Traces of iron are present, but there is no salicylic acid.

----'s Pure Antiseptie Powder consists of pure boraeic acid; 6 oz. are to be dissolved in a gallon of warm water, and ½ to 1 gill (according to the weather) of the solution to every gallon of milk is to be added. Price 1s. per 6-oz. packet.

s Food Preserver.—The proprietors eoolly say in their advertisement that "if those using it do not object to risk a prosecution under the Adulteration Act, it may be diluted with advantage, as its solution at the rate of an ounce in a quart of boiling water will give a fluid," &c. This food preserver is described as a harmless, odourless, colourless, and tasteless powder, and is sold at the rate of 6d. an ounce packet, or 5s. per pound tin. It eonsists simply of borax.

An advertisement appears in the dairy papers of another compound said to have been of immense value in preserving milk, and which the vendors say may be safely used, because it has been certified by medical authorities. It consists simply of borax.

False Amber is made from copal, camphor, and turpentine, and is much used for eigar-holders. It is worth about one-twentieth the price of true amber. It may be detected in two ways: a piece placed on a hot plate will soon melt, while true amber will bear a very high temperature; or, eovered with sulphurie ether, it is at once dimmed and soon softens, so that it can be pricked with a penknife.

Pharmacy.

LEAD PLASTER.

Julius Müller, in the *Pharmaceutische Zeitung*, commends the following modification of the process of preparation:—Melt together in a capacious copper kettle 7,500 grammes of lard and 7,500 grammes of olive oil, and then add immediately three litres of hot water; then stir into the mixture 7,500 grammes of litharge previously completely deprived of carbonic acid by ignition (i.e., until nitric acid will cause no more effervescence). Set aside over night; the following day boil the plaster over a gentle fire, as usual, but without any further addition of water, it being completed in from two to two and a half hours, and without a fault. The advantage of this procedure is that the addition of water during the boiling, so very annoying and ofttimes dangerous, is entirely avoided.

QUININE TEST.

The following simple test has been proposed by Mr. O. Hesse (Archiv. der Pharmacie, December, 1878). Agitate 0.5 gramme of the sulphate of quinine to be tested with 10 e. e. of water at 50° to 60° Celsins. After eooling filter and put 5 c. c. of the filtered solution in a bottle, cover with 1 c. c. ether, and add 5 drops of liquor ammonia. Cork the bottle, agitate lightly a few times, and set aside for two hours. If no crystals are observable in the ether layer, even by the aid of the microscope, the sulphate of quinine was pure. Small granular crystals

^{*} Dingler's Polyt. Journ., ccxxxi., 272. † Zeitschrift des Oesterreich. Apothek. Verein, April I, 1879, p. 152.

prove the presence of cinchonidin, and needles in concentric groups indicate cinchonine, or conchinin. C. Rump has since communicated to the *Pharmaeutische Zeitung* a comment on this test. He considers that the 0.5 gramme of sulphate of quinine should be put in a test tube, weigh on it 10 grammes of distilled water, hold the tube in hot water until the necessary temperature has been reached. After filtering as before, weigh 5 grammes in another tube, and to this weigh one gramme of ether, adding 3 to 5 drops of liquor ammonia. Set aside as in the other case. He considers 1 c. c. of ether too little.

Dr. C. Schacht, of Berlin, has communicated to the *Pharmaceutische Zeitung* the results of experiments made by him with this test. He records the following results: Sulphate of quinine manufactured by Böhringer (Mannheim), Koch (Oppenheim), Chinin-Fabrik (Brunswick), Conrad Zimmer (Frankfort-on-the-Main), all yielded 3 per cent. of sulphate of cinchonidin and homocinchonidin. That manufactured by Jobst (Stuttgart) was pure. Of foreign quinines he found Howard's pure, while Pelletier's contained 1 per cent., and a sample from Milan 3 per cent.

Double Iodide of Bismuth and Quinine.

The Pharmaccutische Central-halle, referring to the double iodide of bismuth and quinine described by Mr. F. W. Fletcher, F.C.S., at the last meeting of the British Pharmaceutical Conference (see Chemist and Druggist, 1878, page 381), says that the compound is not new. Dragendorf had years ago shown in his work (Gerichtl. Chem. Ermittelung von Giften) that potassium-bismuth-iodide added to a solution of quinine containing \$50000 part of a gramme, would yield a precipitate described by him as orange red. Fletcher, working with larger quantities, describes the precipitate as scarlet red.

BORACIC ACID LINT, &C.

BORLINT (Linteum boricatum), borwadding (Sagena boricatu), are lint and walding impregnated with a solution of boric acid, containing 10, 15, or 20 per cent. The solution is prepared as follows:—

Acidi borici Solve in	 • •	 	Grammes 10, 15, 20
Aquæ destillatæ calidæ	 	 	Grammes 90, 85, 80

To dissolve all the acid the solution must be heated to 122° F. At this temperature the lint or wadding is soaked with it, and is applied, while still warm, wherever it is required.

Borphenol wadding or lint is prepared and used in a similar way. The solution is thus made:—

Acidi borici					Grammes 5-10
Acidi carbolici puri	• •	• •	• •	• •	2
Solve in Aquæ destillatæ calidæ					Grammes 100
Spiritus vini				• •	5
Pharmac. Centralhalle.					

SAKÉ, THE INTOXICATING DRINK OF THE JAPANESE.

According to Korschelt Saké is prepared in Tokio by the following method:—Stewed rice is exposed to the air in a dark room in order to become mouldy, after this has been accomplished a fresh quantity of stewed rice is added, and the temperature kept nearly at the freezing-point.† During the growing of the fungus,* a substance is formed which acts upon the starch of the rice like diastase, that is, converts it into sugar. Now the mash is warmed, and the mycelium of the fungus breaks up into a kind of yeast plant, and fermentation begins. This ferment is added to a new supply of stewed and mouldy rice. Diastase converts the starch into sugar, and the latter is through the yeast plant turned into alcohol and carbonic acid. The Saké is then pressed off and subjected to a slower fermentation, and, in order to preserve it, heated in a closed vessel to a temperature of 115° to 130° F. (Pasteur).

The production of Saké is considerable, as the 33,300,000 inhabitants are estimated to take 20.25 litres per head,—Dingl. Journ.

LATIN IN PRESCRIPTIONS.

THE New York Oil, Paint, and Drug Reporter says:—"A Bill has been introduced into the Legislature of one of our sister States the object of which is to abolish the use of Latin as the language of pharmacy. The Bill provides substantially that from and after its enactment all physician's prescriptions shall be expressed in the common English terms by which the medicines prescribed are known, and that druggists shall employ these English distinctions in labelling their bottles and other dispensing receptacles."

Clippings and Pickings.

"NOT A FOOT BETWEEN 'EM.—What is the difference between an M.D. and a Bargee? One follows the healing the other the towing, path.—Punch.

KNOWLEDGE cannot be acquired without pain and application. It is troublesome, and like deep digging for pur waters; but, when once you come to the spring, it rises up to meet you.

In a communication to the *Pharmacist*, Mr. L. Burstal says that crushed melon seeds, mixed with a little sugar, and followed by a dose of castor oil, form a very efficient vermifuge.

TRADE is bad, and no mistake. A tramp applied for a "sit" the other day and said he was so thin that when he had a pain he could not tell whether it was a stomach-ache or a back-ache.

In Reinmann's Färber Zeitung we find the curious state ment that if cows are fed with alkanet root they yield a bluish milk, if with rhubarb (Rheum palmatum) a yellowish milk, and if with madder the milk is reddish.

THE LATEST sweet thing in verdicts has been returned by a coroner's jury at Tunbridge Wells:—"The child was suffocated, but there is no evidence to show that the suffocation was before or after death."—Sheffield Daily Telegraph.

DEAN STANLEY has consented to the crection of a statue in Westminster Abbey in memory of Sir James Simpson, the late Professor of Midwifery in Edinburgh University, and one of the chief introducers of the use of chloroform as an anaesthetic.

Answering Literally.—A very polite and impressive gentleman said to a youth in the street, "Boy, may I inquire where Robinson's drug-store is?" "Certainly, sir," replied the boy, very respectfully. "Well, sir," said the gentleman after waiting awhile, "where is it?" "I have not the least idea," said the urchin. There was another boy who was accosted by an ascetic lady with "Boy, I want to go to D—— Street." "Well, ma'am," said the boy, "why don't you go there, then?"

MEDICAL JOURNALISM.—The Doctor, a monthly medical which has struggled hard for a few years to get a footing succumbed at the end of the year. The Medical Examiner has ceased for some months past to supply that want which had so long been felt until its advent. The Medical Times and Gazette and the British Medical Journal came out on January 4 with their edges cut. It is much to the discredit of these and other journals that this simple consideration of the convenience of their readers should have been delayed so long. The British Medical Journal has opened a "Confessional," and invites the record of errors, blunders, and faults, as a set-off against the brilliant cures which are made so much of. The utmost secrecy as to authorship is to be observed. One case is published, and it is frightfully suggestive. "R. V." says that he and a friend used forceps in a case of the delivery of a dead child, and five weeks after used the same forceps on another woman, who died of puerperal peritonitis. The forceps, he considers, ought to have been disinfected.

^{* [}In order to prevent the development of bacteria,—Ed. C. & D.] [Probably Aspergillus glaucus,—Ed. C. & D.]

Obituarn.

ANTRELL.—On April 25, Mr. William Cantrell, chemist at druggist and registrar of births and deaths, Bridge Seet, Belper. Aged 65.

CARR.—On May 6, Mr. Bennett Carr, chemist and druggist, Eckington. Aged 69.

JUTLER.—On January 17, 1879, Mr. George Charles tler, chemist and druggist, High Street, Rickmansworth. ed 50.

DUNHILL.—On March 17, 1879, Mr. William Dunhill, armaceutical chemist, Doncaster. Aged 72. Mr. Dunhill I been twice Mayor of Doncaster.

GILL.—On February 16, 1879, Mr. Robert Gill, chemist d druggist, Fore Street, Totnes. Aged 72.

GUEST.—On March 31, 1879, Mr. George Guest, chemist d druggist, Fitzalan Street, Sheffield. Aged 34.

HALL.—On April 13, 1879, Mr. Frederick George Hall, cemist and druggist, Sellwood Terrace, Bromptom. Aged 46.

IBBS.—On March 31, 1879, Mr. John Thomas Ibbs, chemist d druggist, Maldon, Essex. Aged 44.

KNOWLES.—On March 28, 1879, Mr. Richard Henry owles, chemist and druggist, Cobourg Street, Leeds. red 42.

MACINTOSH.—On April 8, 1879, Mr. John Macintosh, emist and druggist, Oxford Street, W. Aged 26.

MANFIELD.—May 6, Mr. John Winter Maufield, chemist, Bury Street, Salford. Aged 76.

MUSSELL.—On February 8, 1879, Mr. George Mussell, memist and druggist, High Street, Alton. Aged 63.

POWELL.—On April 14, 1879, Mr. Cuthbert Powell, chemist nd druggist, Temple Street, Bristol. Aged 22. Mr. Powell as a young pharmacist of unusual ability. At the age of 6 he carried off all the prizes offered by the Bristol Pharnaceutical Association, session 1873-74, and obtained the fills Prize the next year. At the end of 1875 he made a oyage to Australia, on account of ill-health. During his tay in Sydney he followed his profession with a physician, nd his name occurs fifth in the Pharmaceutical Register of New South Wales. He returned to England in 1877, appaently greatly benefited by the change. In 1878 he attended he South London School of Pharmacy, and gained the nedal for Materia Medica and Pharmacy during his stay at he institution. After six weeks' preparation Dr. Muter dvised him to present himself for examination, which he lid with successful results. He valued highly the assistance btained in the South London School, and would have proceeded with his studies there for the Major Examination, out his health would not permit. A cold taken recently Powell was much loved by all who came in contact with nim.

RICHARDS.—On March 9, at Truro, John Edgcome Richards, aged 63, after a few days' illness. One of the earliest members of the Pharmaceutical Society, he managed for many years the businesses of Mr. John Windeatt, at Dartmouth, and that of Messrs. James & James, in the city of Truro, Cornwall. In 1866 he succeeded the well-known Mr. Martin, in Boscawen Street, Truro, where he died almost suddenly.

ROBINSON,—On March 29, 1879, Mr. Alfred Francis Robinson, pharmaceutical chemist, Northgate, Darlington. Aged 41.

SEYMOUR.—On March 19, 1879, Mr. William White Collius Seymour, chemist and druggist, Middlesborough-on-Tees. Aged 60.

Walker.—On March 13, 1879, Mr. Henry William Walker, pharmaceutical chemist, Lord Street, Southport. Aged 55.

WARIN.—On March 3, 1879, Mr. James Warin, chemist and druggist, 41 Blackman Street, Southwark. Aged 64.

WILD.—On April 23, 1879, Mr. James Wild, chemist and druggist, Chorlton-on-Medlock. Aged 46.

Wood.—Professor George B. Wood, M.D., died in Philadelphia on March 30, at the age of 82 years. From 1822 to 1835 he was Professor at the Philadelphia College of Pharmacy, first of Chemistry, then of Materia Medica. From 1835 to 1850 he was Professor of Pharmacy and Materia Medica at the University of Pennsylvania. In England he is best known as one of the authors of the "United States Dispensatory." This was first published in 1833, and the fourteenth edition was issued in 1877, under the revision of Drs. G. B. and H. C. Wood, his sons.

Young.—On March 16, 1879, Mr. Uriah Young, chemist and druggist, Monnow Street, Monmouth. Aged 55.



LIQUIDATIONS.

Notices of first meetings of creditors have been issued in re the following estates.

The dates are those of the "London Gazette" in which the notices first appeared.

FLEET, WILLIAM HENRY, West Mead, late Royal Wells, West Malvern, mineral water manufacturer and chemist.

GERARD, Garton, 215 Bute Road, Cardiff, chemist.

DIVIDEND.

GREEN, ROBERT, 21 Nelson Street, Greenwich, chemist. Second and final, of 4/0, at Beddow & Son's, 2 Gresham Buildings, London.

BANKRUPT DISCHARGED.

JENKINS, DAVID MORRIS, Trcherbert, Glamorganshire, chemist. April 10.

PARTNERSHIPS DISSOLVED.

CHAPMAN & COLE, Congleton, chemists, tea dealers, and tobacconists. March 1. Debts by F. Colc.

CLARK, NETTLESHIP & BAILEY, Leicester, wholesale druggists. April 24. Debts by J. W. Clark.

Holt, Crawshaw & Co., Pendleton, Salford, manufacturing chemists. December 31. Debts by B. Haworth.

RAIMES, BLANSHARDS & Co., and RAIMES & Co., wholesale druggists, manufacturing chemists, and commission agents, Edinburgh, York, and Liverpool. June 30, 1876, by retiral of Thomas Blanshard, George Blanshard, and Walter Melrosc. John Fortune Raimes and Richard Raimes, jun., continue under the same firms.

WINDLE & KNIGHT, 452 Edgware Road, Middlesex, chemists. June 24. Debts by G. J. Knight.

Trade Notes.

A SHEET of specimen labels for aërated-water makers, of various colours, sizes, shapes, and designs, has been sent to us by Messrs. J. B. Lambe & Co., of 199 Upper Thames Street, London.

THYMOL SOAP.—Messrs. Richardson, of Leicester, have manufactured a pure soap of very emollient properties, with which the new antiseptic thymol is combined. It leaves a very pleasant wild-thyme fragrance on the skiu for some time after use.

Messrs. A. F. Pears offer at moderate prices terra-cotta reproductions of Focardi's popular statuette of "The Dirty Boy." We notice that these are being displayed in several London and provincial pharmacies, with the result of winning a smile, at least, from every passer-by. If the exhibit thus adds to the sum of human happiness—and it certainly does have that effect—it becomes a sort of duty to disseminate it. Chemists who assist in this beuevolent enterprise will have the further satisfaction of advertising their establishments.

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IN Messrs. Newbery's advertisement of Berdoes' perfumes last month the reference letters to the drawings of bottles were accidentally misplaced. They should have run in the following order:—C, D, B, A, F, E.

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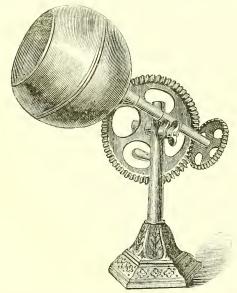
RIMMEL'S AROMATIC OZONIZER.—An opportunity presented itself a few days ago of testing Rimmel's Aromatic Ozonizer, which we mentioned last month. A cat had been accidentally imprisoned in the office of this journal on a Saturday evening. On the Monday morning an odour pervaded the whole place, which the balmy breezes of Cannon Street were powerless to dissipate. The distribution of a handful of the Aromatic Ozonizer sufficed in about a quarter of an hour to annihilate the disagreeable odour and substitute for it the refreshing atmosphere of a forest perfume.

Two months ago we mentioned that Mr. Mather had introduced penny boxes of cachou lozenges in very convenient little brass boxes with sliding-lids, as shown in the engrav-



ing. He now supplies in the same style the old-fashioned silvered eachous to retail at 2d. The box slips easily into the waistcoat pocket, and with its contents is astonishingly cheap.

CARTNER'S PILL-COATERS.—This is an apparatus which combines simplicity with efficiency. It consists of a copper cylinder on an iron or brass stand. By a simple arrangement of wheels the cylinder is rapidly revolved on its axis. The pills to be coated are put inside and surface-moistened

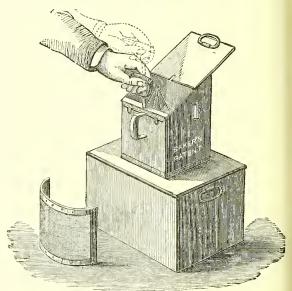


with syrup or mucilage. A small quantity of starch or French chalk, according as a dull or polished coating is required, is then thrown in, and the revolutions are continued until the pills are dry and evenly coated. The smallest machine is capable of coating from 2 oz. to 1 lb. of pills. The operation is finished in about a quarter of an hour.

THE KEPLER MALT EXTRACT is an excellent representative of this now popular class of preparations. It is said to be made from freshly-malted barley, wheat and oats in combination. A suggestion made on the label that it may be taken in grated water is a very good one. In this form it is very pleasant, and we should expect that its medicina properties would be heightened.

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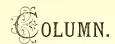
Baker's Sifting and Mixing Machines.—Some important improvements have lately been effected in the apparatus figured below, which is now a very useful addition to the druggist's furniture. The mesh, when fitted into the sieve, presents a coneave surface within, and on this an agitator works rapidly. This is regulated by pivot attachments at the sides, so as to fit closely, whether a coarse or fine mesh is employed. The sieve is covered, and the powder—if the quantity is more than a few ounces—is



received into a box. Small quantities can be sifted on to paper without any dust, the space below the mesh being perfectly protected by the sides of the sieve. We have seen Gregory's powder well mixed by twice passing through one of these sieves, the smallest size being used, and some 6 oz. finished in about as many minutes. There are seven degrees of meshes and five sizes of sieves.

EXT. CINCHON. RUBR. FLUID (EVANS).-We have already referred to the treatment of intemperance adopted by a Dr. Robert D'Unger, of Chicago. He administers, in graduallydiminishing doses, a very concentrated fluid extract of cinchona rubra, and, according to him, this very soon leaves the drunkard with an absolute aversion to alcoholic liquors. His alleged discovery has attracted a good deal of attention in America, and New York reporters have visited him to get details. Their narratives have been also quoted in some English journals. The medicine is now offered to the medical profession by Messrs. Evans, Sons & Co., of Liverpool, and it is to be hoped that British drunkards will prove as susceptible to the influence of the red cinchona as their Chicago brethren have shown themselves. Messrs. Evans & Co. have favoured us with a sample, in order, they say, "that you may try the effects of this remedy, when probably you will be able to give a favourable notice." It is somewhat saddening to find that our little weakness is so notorious even as far away as Liverpool.





TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one words.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of The Chemist and Druggist, and all correspondence relating to it must be addressed to the "Publisher of The Chemist And Druggist, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

Deposit of Money.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We shall acknowledge receipt to both parties by post-cards, and shall only pay it away on the advice of the remitter. Whether returned to him or paid to the seller, we shall charge a commission of $2\frac{1}{2}$ per cent. on any money thus passing through our hands, and not less than 6d. on any single transaction. This arrangement should entirely prevent any cause of complaint or dissatisfaction arising out of this section of THE CHEMIST AND DRUGGIST.

FOR DISPOSAL.

Specie jars and 8-gallon carboys. 9/2.

Cheap soda-water machine. Bygott, Huddersfield.

Southall's Cabinet, 12s. 6d. "Alpba," 17 Bloomsbury Square, W.C.

29 dozen 8-onnee wide-mouth stoppered ships' squares, 2s, dozen. 7/27.

squares, 2s. dozen. 7/27.

The Lancet sent weekly at half-price. Higginson, Newferry, Birkenhead.

Five-feet centre dispensing counter and screen, in good condition (Lowdon). 8/20.

100-ounce bottle Howard's morph. mur., 7s.; 25-ounce tin Howard's quimine, 13s. 7/26.

What cash offer for 1 cwt. mcdal glue, finc quality; sample free. Herbert Kemp, Horncastle.

4-doz. each, 2s. 9d. Sweeting's Elixir, Oxley's Essence, Norton's Pills. Goodenough, Somersham.

Tincture press and root cutter; also a very nice crutch, nearly uew. M. M., 28 John Street, Bedford Row, W.C.

Three 80-oz. sweet bottles, stoppered; three mahogany carboy-stands; embossing stamp. lot 21s. 6d. 8/17.

Split sodas, 20 gross, no name, new, of excellent quality; casb price, 10s. a gross. Baildon & Son, Edinburgh.

1,000 gross white daffy corks, 5d.; 200 gross long white wine corks. Harrop, chemist, Middleton, Manchester.

Forty-seven numbers of Musprat's "Chemistry," at 6d. each, or exchange Whelpton's pills. Kendrick, Redditch.

150 lbs. fine English honey, price 7d.; also 2 galls McDougall's carbolate specific, 1s. 6d. per gall. Potts, Chemist, Mansfield.

Baker's patent sieve and mixer, No. 2, quite new, cost 33s.; price 27s., or offers. T. Taylor, 81 High Street, Peckham.

3½ lbs. Mitcham Ol. lavand., 1872, 1873, 1874, for sale, warranted genuinc. What offers? Singleton & Rigg, Chemists, Preston. Second-band half-plate camera and leus, cheap, also other photo sundries. W. M., The Firs, Caterham Valley, Surrey.

Guttapercha sticks, a few gross, 6s. 6d., cash with order, stamped envelope for sample. Lockwood, Chemist, Sheffield.

Insect powder, about 400 lbs., from flowers, ls. 6d. lb., cash with order, two stamps for sample. Lockwood, Chemist, Sheffield.

Two very bandsome specie jars, with mabogafty bases and gilt covers; splendid coudition. Longley, Chemist, North Street, Leeds.

The Pharmaceutical Journal posted Tuesday after publication for remainder of 1879, 6s., including postage. 5/35.

"Practical Treatise on Materia Medica and Therapeutics," by R. Bartholen, quite new, cost 16s.; what offers? post free. 31/67.

Twenty pounds best magenta crystals; 3 lbs. white gam siftings. What offers? H, 196 Union Street, Oldham.

Complete set of books for Preliminary Examination, everything requisite, cash 12s. 6d.
Particulars of "Junior," 10 Queen's Road,
Brighton.

12 doz. Young's patent carriage candles, 8d., 8s. doz. 1½ lb. cboice '74 ol. lavand. Mitcham, 80s. per lb. Nuttall, 206 Bury New Road, Manchester.

Show-jar, handsomely labelled iuside, with gilt and red cover, height 16½ inches, good as new. "Chemist," Post-office, Stoke-on-Trent.

Cheap.—Y.G.C. glass percolator, graduated to one gallon, quite sound, 25s.; also one dozen 2-gallon air-tight tincture jars. What offers? W. S. Harvey, Margate.

Complete soda-water plant, with quantity of bottles, corks, wires, &c.; also pair 8-gallon pear-shaped carboys, cut stoppers. Gerring, Chemist, Witney.

Quinine (Howard's), 5 ounce bottles, one lb. ol. Pimeutæ., 2-lb. bottle Ol. Menth. Pip. (American). What cash or exchange offers? Maitland, Stonehouse, Plymonth.

Just completed, two volumes, eight divisions (chemistry), practical and analytical, by writers of eminence, for 60s., cost 80s. To A. Y. L., 90 Newhall Street, Birmingham.

A vertical two-horse power steam engine, in good order and repair. Removed to make room for larger one. Price 101. Apply, Claridge & Co., Warwick.

Pair of counter scales and weights, as fig. 1
(Maw), cost 2l., equal to new, price 18s., or
exchange for saleable patents. A. B.,
5 Gloucester Terrace, S. Norwood.

Microscope, cost 71. 7s., searcely used, price 51. 5s.; about 80 demi siphons, in good order, 1s. each; 1-horse vertical boiler, second-hand. 9/16.

Small soda-water machine by Barnett, in perfect working order, with all connections, only been in use six months. For particulars apply, Perkins, Chemist, Liebfield.

Botany.—Herbarium, containing all the leading indigenous and officinal plants, 120 specimens, beautifully mounted, &c., 10s. 6d. Higginson, Newferry, Birkeuhead.

A four-grain pill-machine, to cut 18, 10s; "Priuciples and Practice of Physic," vols. i. and ii., Watson; "Index of Diseases;" "Clinical Medicine;" "Memorandum ou Poisons," Tanner; "Chemistry," Fownes; "Elements of Pharmacy," Sescher," at half publisher's prices. Henry Woodward, Uttoxeter. A quantity of Denzil Thompson's liver pills; Bright's gastro splenic pills; Neave's food, 4d.; Simpson's spice, 6d.; Vals water (quarts); all good and fresh; what offers? 4/2.

Quantity of wax, good colour, but not absolutely pure; quite good enough, however, for wholesale and ordinary purposes, price is. 1d. per lb.; sample free. Herbert Kemp, Horneastle.

Druggist's fixtures and stock, complete utensils, handsome fittings, with inlaid drawers, &c. Stock is of good value, will take 1501., worth 3001. T. Butterworth, 37 Gerard Street, Southport.

1 cwt. currie powder, 1s. lb., sample pound 13d.; 56 lbs. cloves, 1s. 6d. lb.; 80 lbs. very fine cayenne pepper, 8d. lb.; sample, 9d. in stamps. S. Cookson, 129 Oldfield Road, Salford.

Ten 1-gallon show earboys with cut stoppers, and 5 handsome specie jars, in fair condition, together or separately, at uominal prices to clear. Particulars from H., 10 Fore Street Trowbridge.

A strong heavy surgeon-dentists' operating chair (rosewood), with graduating spring for back and side fittings; cost 101; cash 21. 10s.; a bargain. Johnston, at Ward's, Chemist, Berwick.

Specic jar, height 29 inches, royal coat of arms, turned mahogany stand, 21s.; 40 ornamental black ½-gallon carboys with caps, shield pattern labels, never used, 40s., cost 9l. Ellis, Chemist, Southsea.

Pharmaceutical Journal, 1871, 3, 4, 5, 6, and 8, complete; 1872, except September 14; and 1877, November 10 short; no reasonable offer refused. Preston, 71 Market Street, Dalton-in-Furness.

Microscope, Beck's economic, two eyepieœs, 1-in. and ½-in. objectives, rack, coarse and fine adjustments, in mahogany case, nearly new, 41. 10s., or offers. E. Balchin, 230 Upper Thames Street.

Fifty questions asked of a sneecssful student at the last Minor, 2s.; 30 prescriptions (catch and difficult) given to dispense at Minor during past twelve months, 2s. Saunders, A. P. S., 79 Gaisford Street, N.W.

2,500 puff and shaving boxes (wood), beautifully finished, puff boxes 2½, 3, and 4 inches, 18s., 24s. 30s. per gross, or offers wanted for exchange, any quantity supplied. Horniblow, Watchet, near Bridgewater.

Several ewts. very good army biscuits, make capital dog hiscuits and sell well as such. Are as feeding and nourishing as ment biscuits, price 10s. per ewt.; sample free. Herbert Kemp, Horneastle.

Offered.—Decaisne and Le Maout "General System of Botany," published at 52s. 6d., splendidly illustrated, 25s.; Lycll's "Students' Geology, 4s. 6d; Sutton's "Volumetric Analysis," last edition, 7s. 15/15.

Dow, Clark & Co.'s iced-cream drink machine, six taps, copper cylinder, extra fittings, all in first-rate condition; a very low price will be taken to make room. J. H. Read, 2 Market Terrace, Upper Holloway.

Hooper's "Physician's Vade Meenm," 1858, 3s. 6d.; 7 1s. 1½d. packets Morton's "Motbers' Friend," 3s. 6d.; 16 doz. ½-oz. male syringes, 9d. doz.; 5 lbs. aperient lozenges (greengage paste, scammony resin 1 grain, calonel ½ grain), 3s. lb. Throssell, Cambridge.

One-gallon wronght-iron tincture press, 18s. 6d.; what offers for three 2-gallon pear-shaped carboys, four 1-gallon npright, and three ½-gallon ditto; 2 dozen 30-oz. blue syrup bottles; Statham's 3l. 3s. chemical cabinet. Smith, Chemist, Amersham.

Gregory's "Handbook of Organic Chemistry"
(tbird edition), published at 9s. 6d.;
"Handbook of Inorganic Chemistry"
(Gregory's); Hardwick's "Photographic Chemistry; "Beasley's "Receipt-book,"
quite new; offers? C. Hanson, Pharmacy,
Buckhurst Hill, Essex.

Tooth forceps and elevator, in case, 4s. 6d.; five forceps, two elevators, 17s. 6d.; or all nine (two new and unused), 21s.; new, 4s.; gum lancet, 2s. 6d. Egyptian, Chilian, Japanese, Turkish, Ronmauian, Servian, Finland &c. assorted forcign stamps, 4d. 100, 1,000 for 2s. 6d.; unnsed, 4d. dozen, 50 for 1s. Turner, Chemist, Totterdown, Bristol.

New 31s, 6d. bent T. B. case; new brass doorplate; 21s. Statham's cabinet; 20s. Leath's Homœopathic medicine chest; 15s. "Nautilus" swimming-belt; mahogany scales, fig. 5, Maw's; large double silver gilt smelling bottle, ruby and white, cost 23s. 6d.; half-dozeu hathing caps; large iron mortar and pestle. Offers. Smith, Chemist, Stroud.

Ess. Limon. (finest), 11 lbs. original eopper 7s. W. qt., 7s. 6d. per lb.; 20 galls. ql. olivæ sec., 4s. gall.; large mahogany upright counter glass-case; brass counter scales, in mahogany case; hrass pillar ditto, on mahogany stand, with drawer; Maw's fig. 1 specie jar, with gilt cover; bargains. Address, B., 11 Bridge Street, Goole, Yorks.

Offers wauted for The Chemist and Druggist for 1873, 1878; also the Pharmaceutical Journal 1876, 1877, numbers complete; an odd lot comprising 68 Pharmaceutical Journals 1873, 1874, for 1878 one short, for 1875 three short; also The Chemist and Druggist 1874, one short; ditto for 1877, two short; no reasonable offer refused. Pickburn, Kidsgrove, Staffordshire.

Dentists' manogany show case and mirror combined, 30s.; rosewood marble-topped spittoon, 31. 10s.; American office lathe, 31.; Lawson's vulcaniser, complete, 30s.; Bunsen's battery, 2s. 6d.; highly-finished specimens of artificial teeth in the beautiful new celluloid base, 10s. each; Clover's nitrons oxide apparatus, complete, 31. 10s. Dongan, 172 Oxford Street, Manchester.

Surplus corks, 100 gross taper giuger heers, 5½d.; 50 ditto straight daffys, best quality, 4½d.; 100 ditto taper daffys, 4½d.; 50 ditto wines, 6d. per gross; set of tooth scaling instruments in case complete, 3s. 6d., not been used; extracting key, 1s. 6d.; splendid bright spider-wheel bicycle, 50-inch wheel, price 7t., not been used, worth 15t. Halford, Chemist, New John Street, Birmingham.

▲ Cowper's parlour printing press, by Holtzapfel, 11 in. by 7½ in. bed, with ahont 80 lbs assorted type, greater part nearly new, with rings, rule, ornaments, and other necessaries suitable for chemist's printing; also *The Chemist and Druggist* from June, 1871, to end of 1875. What offers? (Devon.) Address in first instance to Bartlett, 171 Loughborough Road, Brixton, Loudon, S.W.

To Mineral Water Mauufacturers.—For sale, a 2½-horse power table-engine, in thorough repair, occupies very little space, fly-wheel 3 feet, price 151.; Clark's (Cauterbury) hottling-rack, fitted with H. Tyler & Co.'s latest pateut tap, quite equal to new, price 101.; Tyler & Co.'s No. 4 soda-water machine, complete, solntion-pan, fast and loose pulleys, for steam-power if required, capable of producing 200 dozen per day, price 201. Address, Jameson & Wilkins, Mineral Water Works, Hastings.

A bargain. Nine vols. of the *Pharmaceutical Journal*, unbound, new, and clean, every number correct from the commencement of the enlargement of the journal until the present time, at 1d. per number. Apply, M. P. S., 6 Chester Place, Plumstead.

Sonthall & Dymond's Materia Medica Cabinet (1867); Proctor's "Pharmacy;" Smith's "Guide to 1st and 2nd Pharmaceutical Examinations;" "British Pharmacopæia" (with additions of 1874); Lescher's "Elements of Pharmacy;" Leoni Levi's "Theory and Practice of Metric System;" Judd's "Handbook of Decimals and Metric System;" Lindley's "School Botany;" and Cooke's "Botany;" all the books equal to new, and Materia Medica Cahinet in good condition, T. Young, Cheddar, Somerset.

Nests drawers, mahogany fronts, gold labels, glass knobs; also other uests; uewly goldlahelled store and other shop-bottles and jars, all sizes, show-bottles, species, desk with case in front, counter cases, pill machines; handsome dispensing screen, 5 feet high, 5 feet 9 long; large handsome lamp and scroll irou shelving, mortars, and every requisite; handsome eigar counter-case, 12 divisions gold-labelled, others not labelled; tobacco jars; sheet of plate-glass, in mahogany frame, 5 feet $10\frac{1}{2}$ high, 4 feet $10\frac{1}{2}$ wide; 2 mahogany doors, glazed, with embossed glass; scales, mahogany show-stands, medical books, &c., all cheap. Lists seut. 846 Old Kent Road.

6 lbs. Bole Armen., unground; 33 gross common black hungs, 6d. gross; 7 doz. 1d. packets einnamon lozenges; large quautity of faucy hoxes for Christmas; 15 1s. hottles Rosina's gold paint; 2 doz. 1s. Scott's aromatic cigarettes; 2 gross Templeman's firelighters; 7 6d. comb-cleauers; 45 cigarcases, 8d. doz.; 2 cwt. biscuits, suitable for dog biscnits; 6 gross 1d. boxes Fry's chocolate drops; 3 gross 1d. boxes Fry's chocolate drops; 3 gross 1d. boxes Fry's chocolate drops; 3 gross 1d. boxes Fry's chocolate, plain; 8 gross ½d. bon-bons; 9 gross 2d. packets of sweets, with photos of the world's celebrities, quite new; 3 doz. Bradbury's 1s. packets sheep dipping. Preston, 71 Market Street, Dalton in Furness.

Fifty beut glass counter-cases, from 15s. each; show case, as 73 Maw's; spouge case, as fig. 90; dispensing-screens, as figs. 163, 164, Maw's; 8 ft. 4 iu. long warehouse counter, filled with drawers; 2 ft. 7 in. long mahogany wall case with enphoard under; 120 pearshape window show carboys, from 3s. 6d. each; 150 upright store hottles with japan caps, 1s. 6d. each; quantity stoppered shoprounds, 8s. dozen; eight 10-gall., three 20-gall., two 40-gall. oil cisterns; two 250-gall. square galvanised oil cisterns; 24 14-lb, handsome tea canisters; two 14-lh. treacle cisterns; 8 112-lb. store canisters, and every description of goods required by the trade. Lloyd Rayner, 333 Kingslaud Road, Loudon, N.

Cheap.—10 30-oz. u.m. bottles, 8s. 6d.; 22 black bottles, labelled, 3s. 6d.; 8 20 oz. hlne syrup bottles, gold labels, 4s.; 24 ½-lb. white jars, tin lids, labelled, 4s.; 10 1-lb. white jars, pot lids, 2s. 6d.; all-glass show-case, beut frout, 14 iuches by 4 inches, 3s.; flat case, glazed frout and top, 3 feet 2 inches by 181 inches, will hold upright case on it, 7s.; one case 2 feet 9 inches by 13 inches, 3s.; another 2 feet 8 inches by 14 inches, 3s.; splendid eigar-case, 21 inches by 9 inches, with divisious lettered "Cigars," 7s.; mortar and pestle, solid hrass, 7 lhs., 5s. 6d.; large seedmill, 8s.; Dr. Copland ou "Bronchitis," ls. 3d.; sitz-bath, good as new, 4s.; cask Midland vinegar, eask free, 10s. 6d.; eash with order only. J. W. Adams, 54 Oxford Street, Salford,

Great Bargain.—Chemists' bottles, 13 dozen, labelled, narrow and wide mouth, 32 ounces, almost new; oue dozen stoppered stock hottles, labelled; eight 1-gallon window carboys; two specie jars; mirror, with ornamented tablet; mahogany stand; several valuable books, and sundry other bottles and jars, 131. G. T. Shaw, High Street, Nantwich.

Five-grain pill machine, to cnt 24, 15s., only used once; sloping glass-case, 21 by 33, 15s.; 3 div. cigar-case, 7s. 6d.; 1 doz. cosmetiques, 2s.; § doz. Harvey's toothache pencils, 1s. 9d.; ‡ doz. Wild's gout mixture, 1s. 6d.; 1 Higginson's enema, 2s.; 5 doz. 1d. court plaisters, 2s.; ‡ doz. Cathery's dog soap, 6d.; 1 doz. camphor roll (4d.), 1s. 6d.; 4 doz. 2d. ditto, 3s. 6d. M. D., Wharf Street, Sowerby Bridge.

Shop drawers, gold-labelled, with glass knobs, 2s. per drawer, superior 2s. 6d., iu all lengths, from 2 to 20 ft.; 18 mahogauy monlded top counters, from 4 to 20 ft. long, at 7s. 6d. per foot run; shelving, French polished edged, 4d. and 6d. per ft. in 12-ft. leugths; 3 upright connter cases, with desks, as fig. 13 Maw's, 63s. each; 4 ft. 3 long dispensing screen, as 163 Maw's, 41.; 5 ft. long, 61.; 6 ft. long, 71. 10s.; elaborate dispensing screen, with mirror centre, and case at each end with shelving seat back, 81. 10s.; upright 4 ft. long counter case, as 40; 2 mahogany show stands, as 19 and 85 Maw's: 2 mahogany paper stands, as 51 and 67 Maw's; 2 tooth-brush cases, as 52 and 72 Maw's; label chest, as 26 Maw's; soda-water stand, as 63 Maw's; 24 store boxes, labelled, 1s. 6d. each; quantity wall cases, as 198, 199, 200 Maw's; quantity complete shop fittings, in all lengths, as 189, 190, 196 Maw's; quantity specie jars, show jars, ointment jars, pill machines, tincture presses. Lloyd Rayner, 333 Kingsland Road, London, N.

Dispensing-screeus, as No. 5 on list, mirror centres, 4 feet long, 110s.; 5 feet, 120s.; 6 feet, 135s.; as No. 211 on list, mirror centres and marble slabs in centre, polished plate-glass shelves, 6 feet, 81. 10s.; 7 feet, 101.; 8 feet, 121.; 10 feet, 151.; dispensingscreen, as No. 12 on list, 4 feet, 90s.; 5 fect, 95s.; fixtnres for shop, 18 by 14, cut to fit 401., nearly new; fixtures for shop, about 12 by 13, about 271. cut to fit; about 150 second-hand cases for all positious in a chemist's shop (seud size wauted, and list will be sent); 12 4-lb. jars, new gold labels, 31s. 6d.; 18 4-lb. blne jars, new gold labels, 40s.; desk and case, as Maw's No. 13, 45s.; case uearly new, as Maw's fig. 40, sheet glass, 6 feet long, 110s.; pair of specie jars, uew, richly gilt, glass lids, 26 inches to top of lids, 60s.; pair of specic jars, richly gilt, new, Royal Arms, glass lids, 30 inches to top of lids, 110s.; to reduce stock, about 25 specie jars, 40 inches to top of cover, Royal or other arms, glass lids (nothing can surpass these jars), 70s. each, ordinary price 90s. Richard Tomlinson, Shopfitter, 15 St. Paul's Square, Birmingham. Write for lists.

WANTED.

Logwood extract mauufacturer. 3/24.

Handsome outside shop lamp. Particulars to W. S. Harvey, Margate.

Howard's quinine and McFarlane's mur. morphia.
Pateuts in exchange.

Three-grain pill machine. State lowest price to Wilhy, Belgrave Gate, Leicester.

Scott's cigarettes 1s., Barrow Evan's hair restorer, large composition mortar. 00/00.

Wholesale English price-lists. W. D. Brothers, Drnggist, Milton, Ontario, Canada.

Small shop fountain for gold-fish or ferns. Size and price to Davies, Chemist, Rhyl.

Pereira's "Selecta è Prescriptis," Cooke's "Manual of Botany;" to purchase. 4/29.

Vincture-press; American Druggists' Circular; formula infants' soothing syrup. J. C., Lingdale, Guisborough.

Vhelpton's pills, 2s. 9d. size, soiled wrappers no object, state lowest price per doz. Lockwood, Chemist, Sheffield.

Themist and Druggist from January to June, 1876; state lowest cash price, carriage paid. J. Slater, Wells, Somerset.

łum opii, Holloway's pills, &c.; exchange lady's sterling silver watch, cost 2l., new, approval. King, Chemist, Soham.

Dentist lathe, dental engine, and wax moving figures; also a Medical Journal, week old, in exchange for Chemist and Druggist, Dental Journal, or Pharmaceutical Journal. A copy of the "Dispenser's Vade Mecum," published 15 years ago. State price. 3/23.

A good vulcaniser, flasks, and other dental requisites. State price and full particulars, 9/23.

Clean copy of Kelly's "Chemists and Druggists'
Directory." State date, condition, and
price. Hay, 4 Regeut's Terrace, Hull.

FORMULÆ.

Will take 31. 10s. for receipts advertised last month at 51. 5s. 5/297.

Formula for 10s. for an article, by sale of which vendor clears 20l. per annum. For particulars send post-card. 9/15.

Beware of Cheap and Worthless Imitations.— Fragrant foaming dentifrice (similar to a Floriline); effervescing fruit saline (resembles Eno's); splendid black ink (never corrodes steel pens); marking iuk (black or red); golden hair-wash; brilliantine (inseparable); bay rum (splendid imitation); hair colour restorer; pomade for removing and preventing scurf; Kaloderma, or skin beautifier; cherry tooth paste (never ferments); cement (equal to Coaguline); pill coating (pearly white); magic neuralgic drops (never-failing remedy); copaiba paste (transpareut); with many others, send stamp for list. The toilet requisites are identical with those prepared by a renowned West-end perfumer; the others are equally good; all are inexpensive to prepare; 5s. each (five for 11.); open to exchange. "Analyst," care of Mr. Warnes, 79 Gaisford Street, N.W.



TRADE since Easter has shown signs rather of contraction than of development. The value of goods imported during April was within a trifle the same as that of April, 1878. That this indicates a very considerable increase in the general quantity will be evident when the comparative prices of our great supply of cereals is taken into account. These are from 15 to 20 per cent. eheaper than they were twelvemonths ago. Consequently we have been able to take more of them and pay less for them. This fact is a very important one. The low price of our food basis has enabled this country to support the severe depression in trade to an inealculable extent. That one fact, and all that it implies, should at least be considered carefully by those eeonomists who have shown themselves ready to abandon too readily the free-trade policy which, as we think, has never served us so well as in this erisis. Exports are 10 per cent. below those of last April, but only 3 per cent. below those of April, 1877.

The export trade of the country up to April 30 compares as follows with that of the two previous years:—

				1877	1878	1879
January February March April	••	••	••	 £ 15,946,080 14,393,745 16,920,930 15,206,577	£ 15,423,911 14,896,320 16,756,397 16,327,059	£ 14,196,518 12,713,069 16,170,518 14,642,358
				62,467,332	63,403,687	57,722,463

It may be mentioned that April was the last month of 1878 which showed an advance over 1877.

The official returns show also the following figures:-

Imports of Chemical Products (not Alkali) from January 1 to April 30.

		0			•	
1877			1878			1879
£			£			£
344,070			314,450			273,411
Exports	of Ch	emical	Products	(not	Alka	(li) from
	Ja	nuary	1 to Apr	il 30.		
1877			1878			1879
£.			£.			£.

603,840 588,436 587,826

The exports of alkali in April show a slight increase in quantity, but a decline in value over those of the previous April.

The advance in price which had made some progress during the two previous months, and had excited the hope of a more profitable or, at least a less ruinous, year than last, has been lately eheeked.

Soda erystals have fallen from 70s. to 65s., and biearbonate from 10l. 5s. to 9l. 10s. per ton. Notwithstanding that several sources of supply have been closed, it is evident that those remaining are more than equal to the task of meeting the demand. And it is equally evident that their rate of production increases, the quantities exported being a trifle greater than in former years, while there is no sufficient reason to believe that the home consumption is less. Still, more is put on the market than can be absorbed in the regular course of trade.

Bleaching power is now quoted at 6s., landed in London.

Cream of tartar has sold steadily, but a decline has occurred since last month. Tartaric acid remains steady at 1s. $4\frac{1}{4}d$. [for English, and 1s. $3\frac{1}{2}d$. for foreign. Citric has been down to 1s. $8\frac{1}{2}d$., but is now stronger, and again commands 1s. 10d. Ammonia and potash salts have searcely varied.

Quicksilver still remains at its previous low figure of 6l. 2s. 6d. per bottle of 75 lbs. Some rumours of an intended combination of the Californian producers to limit the supply have reached us, and such action would no doubt affect this market, but it is doubtful whether it will come to anything.

Iodine remains firm at its late advance, and there are prophecies of a further rise, but speculation on such would be dangerous.

Quinine, though nominally the same as last month, is in rather more abundant supply, and there are some indications in favour of a decline. A general return to peaceful policies on the part of Governments can hardly fail to have that effect.

At the last April sales of barks prices were fully maintained, but those held last week were marked by less animation. East Indian sorts were in good demand, and the best sold at firm rates, but South American were comparatively neglected. It is stated that some large pareels of bark have since been bought privately.

Opium eontinues somewhat flat, though there is quite a fair prospect of a sudden advance. The usual rumours respecting the forthcoming crop are already arriving, and there is of eourse the chance that some of them may turn out truthful. Drought, locusts, an unusual American demand, and a probable export duty are all spoken of as likely to affect the price. It will certainly be surprising if such a a crop as that of last year, which was fully 50 per eent. beyond the average, should be forthcoming, and an improvement on the present very low quotations is by no means an unreasonable anticipation. A rise of 6d. in morphia salts has lately occurred.

Cape aloes have supported the recent improvements, but only moderate quantities have been offered. Barbados are a trifle eheaper.

May 15, 1879.

Minding Lane!

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CHEMICALS

Acetic (itric Hydrochlar

Tartaric cr

TALENOAL OLS

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IODENE, dry

MAGNESIA, CA MERCURY

PRECIPITATE

Prussian B

SALTS-Alum ..

> Salp Argol,

Boraz,

ACID3-

Balsam of capivi is being bought freely at higher prices. Balsam of Peru has advanced from 4s. to 6s., and the latter price is now refused.

Cardamoms are in much larger supply than demand, and will have to sell at a reduction. Camphor is firmly held, although the stock is large. The market for castor oil is dull, and turns in favour of purchasers. Cloves are in better demand, and prices are steady. Cubebs quiet at 50s. for good average quality.

China galls have been in considerable demand for export, and have sold at 75s. to 76s. 6d. for good.

Cochin ginger has been offered in large quantities, and has declined to some extent in consequence. Gum arabic rather in demand and prices stronger. Asafætida has arrived in abundance, and will probably be quoted lower. Animi is held for higher rates, and olibanum is advancing.

Almond oil is rather easier, the reports of the new crop being favourable, though the severely cold weather of the past month must have adversely affected it. Some Japanese oil of peppermint has been on the market, and after having been offered at 7s., has been partly sold at 6s. and 6s. 6d. Hotchkiss's is rather firmer. Olive oil is, if anything, a trifle cheaper, and the new crop is likely to prove sufficient to keep prices from much advance.

Isinglass at last sales sold at irregular prices, the best kinds realising an advance, and lower qualities declining. At the April indigo sales over 5,000 chests were disposed of, and the anticipation of a scarcity caused some hardening of the prices. Bengal and Madras were 3d. to 6d. dearer, and Kurpahs made 2d. to 4d. advance.

East Indian linseed has steadily advanced during the month, and still shows an upward tendency.

Oils.—Linseed and rape have both been dull, but at present are firmer, and are quoted higher for forward delivery. Levant olive is easier. Cocoanut still dull. Palm unsaleable at previous quotations. Sperm has sold at 56l., and good whale at 27l. and 28l. Seal and cod are neglected. Petroleum has been rather higher, but has now receded to $7\frac{1}{8}d$., and forward sales have been made at $\frac{1}{2}d$. less. Turpentine sells at 22s. $4\frac{1}{2}d$. for spot, and at 22s. 6d. and 22s. 9d. for forward delivery.

We add a record of the stocks of the principal drugs in the port of London on April 30.

	1879	1878		1879	1878
	10.5	1010		1019	1878
Aloescs	1,839	1,639	Gum (Cont)—		
,,kegs	11	15	Assafætida pkgs	239	298
gourds	349	1.457	Benjamin.	974	613
Aniseed, Star chts	499	915	Damar	252	775
Arrowrootcks	11,973	15,276	Galbanum ,,	19	25
,, bxs & tins	8,236	6,639	Gamboge ,,	94	128
Balsam cks, &c.	41	109	Guaiacum ,,	43	117
Bark, Medicinal			Kino	8	iii
cks, &c.	295	836	Kowrie tns	716	915
" srns, &c.	11,619	8,066	Masticpkgs	147	126
Boraxpkgs	790	918	Myrrh, E.1.	204	266
Bees' Wax bls &			Olibanum ,,	1,523	3,845
srns	596	527	Sandarac., ,,	1,027	1,032
,, cks & cs	2,334	1,320	Senegaltns	23	13
,, cakes	27	17	Tragacanth pkgs	2,050	1,090
Wax, Jap. veg. pkgs	4,680	5,884	Ipecac cks & bgs	211	213
Camphorpkgs	10,575	4,231	Jalapbls	467	496
Cardamomschts	316	447	Nux Vomica pkgs	3,313	3,391
Cocc. Ind. bgs, &c.	1,629	2,195	Oil		,,,,,
Colombo root pkgs	602	657	Castorcks	2	1
Cream Tartarcks	96	88	,,CS	6,397	2,873
Cubebsbgs	167	184	Palmtns	1,463	279
Dragonsblood chts	69	91	Cocoanuttns	4,060	2,150
Galls, E.I. cks & cs	2,965	1,556	Olivecks, &c.	721	1,077
M'terraneau sks	723	1,042	Aniseedcs	119	250
Gum-			Cassiacs	307	667
Ammoniac pkgs	456	509	Opiumchts, &c.	930	1,640
Animi & Copal			Rhubarbchts	1,160	938
pkgs	4,160	8,581	Sarsaparilla bls	689	1,073
Arabic, Barbary			Sennabls, &c.	1,256	2,664
pkgs	952	953	Shellacchts	41,826	43,457
Turkey ,,	560	453	Turmerictns	1,930	1,209
E.I,,	1,329	2,714			

CHEMICAL SOCIETY. Thursday, April 17.

DR. ROSCOE in the chair.

The following communications were made:-

"On Heptane from Pinus Sabiana," by T. E. Thorpe, Wenzell, in 1872, described under the name of "Abietene," a hydrocarbon obtained by distilling the exudation of the Californian "nut pine." The author has subjected the crude oil (which occurs in commerce in San Francisco) to an exhaustive chemical and physical examination, and finds that it consists of nearly pure heptane. This discovery that a paraffin is playing the part of oil of turpentine in a tree now living is exceedingly interesting, as our only natural sources of this hydrocarbon are petrolcum and fossil-fish oil.

"On the Determination of Tartaric Acid in Lees and Inferior Argol," by B. J. Grosjean. The author suggests several improvements in the well-known oxalate process of Warington:—The employment of the method of filtration suggested by Casamajor, the addition of potassium chloride to render the precipitation of the potassium bitartrate complete, precipitation of the latter salt by stirring, &c. By these improvements the author has shortened the time required for an estimation to four hours.

"Conditions Affecting the Equilibrium of Certain Chemical Systems," by M. M. P. Muir. The author has carefully studied the influence of time, temperature, and mass on certain reactions:—1. Bismuthous chloride, hydrochloric acid, and water. 2. Calcium chloride and potassium and sodium carbonate.

"On the Action of Oxides on Salts" (part 2), by E. J. Mills and J. W. Pratt. The authors have examined the actions of aluminic, ferric, and stannic oxides on potassic carbonate at a temperature of 735°.

"Examination of Substances by the Time Method," by J. B. Hannay. The author has arrived at the following conclusion:—Two hydrated salts, in forming a double salt containing the normal amount of water, expend one half of the affinity of the anhydrous salt for its water of crystallisation in combining with each other, showing that the formation of double salts is comparable with other forms of chemical action.

"Preliminary Note on Certain Compounds of Naphthalene and Benzene with Antimony Chloride, &c.," by Watson Smith. The author has obtained white needles, which he believes to be trinaphthylstibine or naphthyloxystibine. He has obtained other crystalline compounds, which have not yet been examined.

Thursday, May 1.

DR. WARREN DE LA RUE, President, in the chair.

The following papers were read:

"On the Volumes of Liquids at their Boiling Points Obtainable from Unit Volumes of their Gases," by Dr. W. Ramsay. The author has suggested the use of a thin glass bulb filled with the liquid and heated in its own vapour until expansion ceases; the bulb is then allowed to cool, and is weighed. Thus the volumes of many liquids at the boiling points—"ebullition volumes"—have been determined by the author. His results agree closely with those obtained by Kopp. The time required for a determination is half-anhour.

"On a Method of Precipitating Manganese as Dioxide, and its Application to the Volumetric Determination of Manganese," by J. Pattinson. Manganese in solution can be completely precipitated as dioxide by bleaching powder solution or bromine water, if an equal quantity of iron as ferric chloride be present. The dioxide is then dissolved in dilute sulphuric acid, reduced by standard ferrous sulphate, and titrated with bichromate.

"On the Determination of Nitric Acid as Nitric Oxide by means of its Action on Mercury," by R. Warington. In this well-known process of Crum and Frankland the author has found that the removal of the chlorides is unnecessary, and that small quantities of organic matter, except cane sugar, do not interfere with the results.

do not interfere with the results.

"On a New Class of Colouring Matters," by Dr. O. N. Witt. By oxidising a mixture of metatoluylene diamine and dimethyl paraphenylene diamine in aqueous solution the author has obtained several new colouring matters—toluylene blue, violet, pink, &c.

Monthly Price Current.

he prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

	offered by the Wholesale Fir	ms.									
31	HEMICALS.		18	379	,			18	378	١.	
	ACIDS—	8.	d.		3.	d.	8.	d.		8.	d.
ľ	Aceticper lb.	0		tc tc	0	0	0	23	to	0	3
	Citric,	1	10	• •	7	0	2 4	0	••	7	0
	Hydrochlorper cwi Nitrioper lb.	0	0 4}	••	6	0	0	41	• •	ó	0
	Oxalic,	0	4		0	0	0	41/2	• •	0	44
	Sulphuric,	0 1	0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		0	$\frac{1}{0}$	0	0¥ 4¾	••	0	0
	Tartaric crystal ,, powdered ,,	î	41		0	0	1	$\frac{1}{4}\frac{1}{4}$		1	5
4	ANTIMONY ore per ton	240	0		300	0	240 37	0	••	300	0
	crude per cwt.	. 36 0	0	• •	0	0	50	Ö	• •	0 51	0
	ARSENIC, lump ,,	25	0		0	0	26	0		0	0
1	powder,	100	6		$\frac{10}{105}$	3	110	9	• •	9 115	6 0
•	BRIMSTONE, rough per ton roll per cwt.	9	6	• •	10	3	9	9	• •	10	6
	flour ,,	10	6	••	12	3	11	6	••	13	6
1	ODINE, dry per oz.	8	6		0	0	1 8	6	• •	0	0 0
- 3	MAGNESIA, calcinedper 1b.	1	10		0	0	1	10		0	0
1	MERCURY per bottle	$\frac{122}{17}$	6	••	0	0	140 19	0 6	••	0 20	0
-	MINIUM, red per cwt.	28	9		0	0	31	6	••	0	ő
1	PRECIPITATE, red . per lb.	3	3		0	0	3	7	• •	0	0
,	PRUSSIAN BLUE ,,	3	$\frac{2}{0}$		0	0	3 0	6 0	••	0	0
		Ü	•	••					•••		•
(9)	ALTS—	199	c		105	0	127	6		125	0
	Alumper ton powder	$\frac{122}{140}$	6 0	• •	125 0	0 0	150	0	• •	135	0
	Ammonia:										
	Carbonate per lb.	0	$6\frac{1}{2}$	••	0	$6\frac{3}{4}$	0	$6\frac{1}{2}$	••	0	$6\frac{3}{4}$
	Hydrochlorate, crude, white per ton	600	0		720	Ü	580	0		720	0
	British (see Sal Am.)				950	Α.	400	0		410	0
	Sulphate per ton Argol, Cape per cwt.		0	• •	370 82	0	75	0	• •	92	0
	Red,	56	0		70	0	58	0		70	0
	Oporto, red. ,, Sicily,, ,,	28 60	0	• •	30 65	0	32 60	6 0	• •	33 65	0
	Ashes (see Potash and Soda)	U	••	0.0			٠	••	O.O	U
	Bleaching powdper cwt.	6	0	••	0	0	$\frac{5}{26}$	9	• •	0	0
	Borax, crnde, British refnd.	$\frac{27}{35}$	0	• •	33	0	35	0	••	28 36	0
	Calomelper lb.		11		0	ŏ	3	2		0	0
	Copper:	18	0		0	0	19	0		0	0
	Copperas, green per cwt.	50	0	• •	55	0	50	0	• •	55	0
	Corrosive Sublimate p. lb.	2	3	• •	0	0	2	7	• •	0	0
	Cr. Tartar, French, p. cwt. 1	80	0	• •	$\frac{102}{82}$	6	98 0	0	••	99 0	0
	Epsom Saltsper cwt.	4	3		6	ŏ	4	3		6	0
	Glauber Salts ,, Lime:	3	0		4	6	3	0	••	4	6
	Acetate, white, per cwt.	11	0		20	0	11	0		20	0
	Magnesia: Carbonate ,,	47	6	••	0	0	47	6	• •	0	0
	Potash: Bichromateper lb.	0	5		0	0	0	$3\frac{1}{2}$		0	0
	Carbonate:	Ü		**	v	ľ۱	_	0.2	••	٠	
	Potashes, Canada, 1st	0.4	^		0.4	,	24	6		0	0
	sortper cwt. Pearlashes,Canada,1st	24	0	• •	24	6	44	U	••	0	0
	sortper cwt.	35	0		35	6	32	0		0	0
	Chlorate per lb. Prussiate,	0	$\frac{61}{101}$	••	0	$\begin{bmatrix} 0 \\ 10\frac{3}{4} \end{bmatrix}$	0	$\frac{7}{10}$	• •	$0 \\ 0$	0
	red ,,	1	8	::	1	101	ĭ	8		ĭ	9
	Tartrate (see Argol and C	rea	m o	f Tai	rtar)	-					
	Potassium : Bromide	1	8		0	0	0	0		0	0
	Unlorideper cwt.	6	6	••	0	0	6	6	• •	0	0
	Iodideper lb.	16	0	• •	16	6	15	0	• •	15	6
	Snlphate, British, in										•
	bottles per oz. Sulphate, French ,,	12	6	• •	12	9	13 13	8	• •	0	0
	Sal Acetosper lb.	$\frac{12}{0}$	9	• •	0	$\begin{bmatrix} 0 \\ 6 \end{bmatrix}$	0	7	• •	0	0
	lal Ammoniac, Brit. cwt.	44	0		45	0	42	0	••	4 3	0
	Bengal, 6 per cent. or										
	underper cwt.	18	9		19	3	22	0		22	6
	Bengal, over 6 per cent.	10	0		10	0	21	0		21	6
	British. refined ,,	18 23	0		$\frac{18}{24}$	6	26	0	• •	$\frac{21}{27}$	0
	Soda: Bicarbonate, p.cwt.	9	6	••	9	9	9	9	••	10	0
	Soda Ash per deg.	0	11/2		0	0	0	0		0	0
	Soda Crystals per ton	65	02	••	0	0	70	0	••	0	0
	Hyposulphite, per owt.	0	0	••	12	0	15		• •	15	9
Sı	Nitrate, JGAR OF LEAD, White cwt.	13 38	3	• •	$\frac{13}{0}$	6	15 37	6	••	15 0	0
	Drown, CAL.	26	6		ő	0	26	0	••	Ŏ	Ō
اد	JLPHUR (see Brimstone)										

			187		1878.
VERDIGRIS per lb. VERMILION, English China ,,	3. 0 2 2	d. 0 2 3	to	8. d. 0 0 0 0 0 0	3. d. 3. d. 1 1 to 1 5 2 8 0 0 2 5 0 0
DRUGS.			••		
ALOES, Hepatic per cwt. Socotrine ,,	70 100	0		$\begin{array}{cc} 170 & 0 \\ 200 & 0 \end{array}$	80 0 180 0 85 0 200 0
Cape, good ,, Inferior ,,	$\frac{46}{42}$	0	••	48 6 45 0	40 0 44 6 35 0 42 0
Barbadoes ,,	50	0	• •	200 0	40 0 160 0
Ambergris, greyoz. BALSAM—	50	0	• •	70 0	80 0 ,. 90 0
Canadaper lb.	0	0 4	• •	$\begin{smallmatrix}1&2\\1&10\end{smallmatrix}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Peru ,,	6	0	• •	0 0	4 9 0 0
Tolu ,, BARKS—	2	3	• •	2 5	3 0 3 3
Canella albaper cwt.	$\frac{20}{24}$	0		28 0 35 0	18 0 22 0 16 6 23 0
Cascarilla, Peru, crown & grey per lb.	1	0	••	2 2	1 0 2 10
Calisaya, flat ,, ,, quill ,,	$\frac{2}{1}$	0	••	3 3 6 0	2 6 4 6
Carthagena "	3 1	6		4 5 8 0	1 5 3 9
E. I ,,	1	6		3 6	1 3 4 10
" good & fine " Pitayo "	4	6	• •	$\begin{array}{ccc} 11 & 6 \\ 3 & 3 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Red,	3 - 0	6 21		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 3 9 0
CAMPнов, Chinaper cwt.	75	0	••	77 6	77 6 0 0
Japan ,, Refin. Eng. per lb.	77 1	6 01	•••	80 0 0 0	82 6 0 0
CANTHARIDES,	1	6		4 3	2 2 5 0
CHAMOMILE FLOWERS p. cwt. CASTOREUMper lb.	0	0		0 0	50 0 200 0 9 0 30 0
DRAGON'S BLOOD, lp. p. cot. FRUITS AND SEEDS (see at		0 eds		260 0 Spices).	100 0 280 0
Anise, China Star per cwt.	_80	0		82 0	75 0 80 0
Spanish, &c. ,, Beans, Tonquinper lb.	35 4	0 6	• •	42 6 7 0	34 0 50 0 1 9 5 0
Cardamoms, Malabar good,	7	G		9 0	5063
inferior ,,	3	0	• •	7 0	1 9 4 10
Aleppy ,, Madras ,,	$\frac{2}{2}$	3		8 0 5 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Cassia Fistulaper cwt.	$\frac{2}{55}$	$\frac{2}{0}$	••	4 2 57 0	3 6 5 0 80 0 89 0
Castor Seeds ,,	0	0	••	0 0	0 0 0 0
Cocculus Indicus ,, Colocynth, appleper lb.	7	3		$\begin{array}{ccc} 8 & 6 \\ 1 & 10 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Croton Seedsper cwt.	28 50	0	• •	30 0 0 0	26 0 31 0
Cummin	27	0		41 0	20 0 35 0
Dividivi ,, Fenugreek ,,	$\frac{12}{5}$	0 1	••	15 6 10 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Guinea Grains . ,,	$\frac{29}{0}$	0	••	30 0	28 0 0 0
Nux Vomica	6	0		9 0	9 6 14 0
Tamarinds, East India,, West India	$\frac{12}{18}$	0	••	$\begin{array}{cc} 19 & 0 \\ 26 & 0 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Vanilla, large per lb. inferior	19 7	0	• •	$\begin{array}{ccc} 25 & 0 \\ 18 & 6 \end{array}$	20 0 27 0
GINGER, Preserved, per lb.	0	$4\frac{3}{4}$	•••	0 6	0 41 0 7
Honey, Chili per cwt. Jamaica ,,	30 35	0	• •	$\begin{array}{ccc} 36 & 0 \\ 41 & 0 \end{array}$	37 0 50 0 38 0 43 0
Australian ,, IPECACUANHA per lb.	0 4	6	••	$\begin{array}{ccc} 0 & 0 \\ 5 & 10 \end{array}$	0 0 0 0
ISINGLASS, Brazil ,,	2	6		5 1	2 9 4 9
Tongue sort ,, East India ,,	3 1	$\frac{2}{0}$	• •	$\begin{smallmatrix}5&2\\4&10\end{smallmatrix}$	3 8 5 6
West India ,, Russ. long staple	3 6	5 0	••	5 0 10 6	3 8 4 0
,, inferior	0	0		0 0	0000
JALAP, good ,,	1	6	••	$\begin{array}{ccc} 2 & 6 \\ 1 & 2 \end{array}$	$\begin{bmatrix} & 1 & 6 & \dots & 3 & 0 \\ & 0 & 8 & \dots & 1 & 0 \end{bmatrix}$
infer. & stems ,, Lemon Juice per degree		10 07	••	$0 \ 11\frac{1}{4}$ $0 \ 1\frac{1}{4}$	0 7 0 71
LIME JUICEper gall.	1	3	• •	1 8	0 0 0 0
Liquonice, Spanish per cwt. Liquorice Root ,,	0	0	• •	0 0	34 0 39 0
MANNA, flakyper lb.	0	0	••	$\begin{array}{ccc} 0 & 0 \\ 0 & 0 \end{array}$	3 6 4 0
MUSK, Podper oz.	24	0	••	70 0	30 0 70 0
Grain, OILS (see also separate list)	32	0	••	62 0	26 0 55 0
Almond, expressed per lb. Castor, 1st pale,	1	9 4§	• •	$\begin{array}{ccc} 1 & 10 \\ 0 & 5\frac{1}{2} \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
second ,,	0	37		$0 - 4\frac{1}{2}$	$0 4\frac{3}{4} 0 5\frac{1}{4}$
Cod Liver per gall. Croton per oz.	$\frac{2}{0}$	$\frac{6}{2\frac{1}{2}}$	••	$\begin{array}{ccc} 4 & 6 \\ 0 & 3 \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Essential Oils: Almondper lb.	20	0		0 0	25 0 0 0
Anise-seed ,,	7	8	• •	0 0	7 0 7 3
Bergamot per ib. Cajeputper bottle	3	6	••	9 0 4 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Carawayper lb.	$\frac{0}{2}$	9	••	$\begin{array}{ccc} 0 & 0 \\ 2 & 10 \end{array}$	$\begin{smallmatrix}9&0&\dots&9&3\\2&9&\dots&0&0\end{smallmatrix}$
Cinnamonper oz.	3	9	• •	4 6	4 3 5 0
Cinnamon-leaf ,, Citronelle ,,	0 0	1 § 3	••	$\begin{array}{ccc} 0 & 1\frac{3}{2} \\ 0 & 3\frac{1}{2} \end{array}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Clove, Ginger Grass ,,	9	$\frac{0}{2\frac{1}{2}}$	••	0 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Lavender per 1b.	0	0	• •	0 0 5 6	1 8 7 0
Lemongrass, per oz.	0	$2\frac{1}{2}$	••	0 3	$0 2\frac{1}{2} 0 3$
Neroli,	0	0	••	0 0	3 0 6 6

1879.	1878.	1879.	1878.
Essential Oils, continued:— s. d. s. d. Nutmegper oz. 0 3 0 31	s. d. s. d. 0 4 to 0 4½	Oils, continued:— £ s. £ s. WHALE, South Sea, pale, per tun 27 0 to 28 0	£ s. £ s,
Orangeper lb. 5 0 7 0	4 3 7 0	yellow ,, 25 0 26 0	32 0 to 0 0 31 0 0 0
Otto of Rosesper oz. 18 0 30 0 Patchouli , 1 6 3 0	$\begin{bmatrix} 35 & 0 & \dots & 44 & 0 \\ 1 & 6 & \dots & 3 & 0 \end{bmatrix}$	brown ,, 21 0 23 0	28 0 29 0
Peppermint:	16 30	OLIVE, Galipoli per ton 0 0 0 0	0 0 0 0
Americanper lb. 7 6 9 6	10 9 12 6	Gioja 0 0 0 0	0 0 0 0
English , 21 0 23 0 Japan , 6 0 6 6	24 0 25 0	Levant , 42 10 43 0 Mogador , 0 0 0 0	50 0 0 0
Rosemary , 0 0 0 0	2 0 2 6	Spanish ,, 43 10 46 0	50 0 0 0
Sassafras , 2 0 2 3 Spearmint , 8 0 9 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Sicily , 44 0 0 0	0 0 0 0
Thyme, 0 0 0 0	0 0 0 0	Ceylon ,, 37 0 37 10	48 0 0 0 39 0 39 10
Mace, expressed per oz. 0 5 0 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Mauritius ,, 37 10 37 15 GROUND NUT AND GINGELLY:	39 0 40 0
inferior ,, 10 0 16 0	10 0 12 0	Bombay 0 0 0 0	0000
QUASSIA(bitterwood)perton 100 0 130 0	100 0 130 0	Madras 0 0 0 0	0 0 0 0
RHUBARB, China, good and fineper lb. 2 11 3 11	3 3 4 1	PALM, fine	39 0 0 0
Mid. to ord, 0 6 1 10	1 0 2 6	RAPESEED, English, pale 30 15 31 0	34 5 0 0
BOOTS—Calumbapercwt. 30 0 55 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	brown 28 15 29 0 Foreign, pale 0 0 0 0	32 5 0 0
China , 28 0 30 0	25 0 30 0	brown 0 0 0 0	0 0 0 0
Chirettaper lb. $0 2\frac{1}{2} 0 3\frac{1}{2}$ Galangalper cwt. $20 0 22 6$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	COTTONSEED	31 0 31 10
Gentian , 16 0 20 0	19 0 21 0	TALLOW	43 10 44 0
Hellebore, 0 0 0 0 Orris, 20 0 45 0	0 0 0 0 55 0 65 0	TURPENTINE, American, cks. 22 $4\frac{1}{2}$. 0 0	s. d. s. d.
Pellitory, 0 0 0 0	70 0 76 0	French ,, 0 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Pinkper lb. 1 0 1 4 Rhatany , 0 2 0 5	$\begin{bmatrix} 0 & 0 & \dots & 0 & 0 \\ 0 & 4 & \dots & 0 & 7 \end{bmatrix}$	Petroleum, Crude 0 0 0 0	0 0 ,, 0 0
Seneka, 1 9 1 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	refined, per gall. $0 7_{4}^{3} 0 8$ Spirit $0 7_{4}^{1} 0 7_{4}^{3}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Snake, 0 0 0 0 SAFFRON, Spanish	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	SEEDS.	
SAFFRON, Spanish, 20 0 40 0 SALEP per cwt. 120 0 140 0	240 0 300 0	CANARYper qr. 44 0 55 0 CARAWAY, English per cwt. 0 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Sarsaparilla, Lima per lb. 0 4 0 5½	0 6 0 7	German, &c 0 0 0 0	48 0 49 0
Guayaquil, 1 1 1 4 Honduras, 1 0 1 4	$\begin{bmatrix} 2 & 2 & \dots & 2 & 6 \\ 0 & 11 & \dots & 1 & 6 \end{bmatrix}$	CORIANDER	18 0 23 0
Jamaica, 1 3 1 7	1 2 2 6	LINSEED English , 60 0 68 0	0 0 0 0
SASSAFRASper cwt. 0 0 0 0 SCAMMONY, Virginper lb. 23 0 25 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Black Sea & Azof 49 0 0 0 Calcutta ,, 52 6 0 0	52 0 0 0
second & ordinary ,, 8 0 20 0	0 0 0 0	Bombay ,, 53 0 0 0	50 0 50 6 52 0 0 0
SENNA, Bombay, $0 01 021 021 Tinnivelly, 0 14 09$	0 0 0 0 0 0 11 1 1 6	St. Petrsbrg.,, 50 0 0 0 Mustard, brown. per bshl. 0 0 0 0	0 0 0 0
Alexandria, $0 \ 3\frac{1}{2} \ 1 \ 0$	0 5 1 6	white ,, 9 0 12 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
SPERMACETI, refined ,, 1 3 0 0 American ,, 1 1 1 2	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	POPPY, East India, per qr. 52 6 0 0 SPICES.	52 6 0 0
SQUILLS, 0 1 0 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Cassia Lignea per cwt. 37 6 45 0	41 6 50 0
GUMS. £ s. £ s.	£ s. £ s.	Vera , 22 0 35 0 Buds , 57 0 58 0	22 0 45 0
Ammoniaci drop per cwt. 2 2 2 10	1 18 2 5	CINNAMON, Ceylon:	59 0 0 0
Animi, fine washed ,, 0 12 2 0 1	0 15 1 15 13 15 14 10	1st quality per lb. $1 2 \dots 3 3$ 2nd do , $1 0 \dots 2 3$	1 10 3 1
boldscraped ,, 12 0 13 15	12 10 13 10	3rd do , 0 11 1 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
sorts , 9 0 11 17/6 dark , 5 0 8 10	6 0 11 10 4 0 8 10	Tellicherry , $0 \ 0 \ \ 0 \ 0$ Chips , $0 \ 2\frac{3}{4} \ \ 0 \ 5$	00.00
ARABIC, E.I., fine		CLOVES, Penang , 1 7 1 9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
pale picked, $2 10 \dots 3 0$ srts.,md.to fin. ,, $1 \stackrel{?}{\downarrow} 6 \dots 2 0$	$\begin{bmatrix} 2 & 15 & \dots & 3 & 3 \\ 2 & 0 & \dots & 2 & 14 \end{bmatrix}$	Amboyna ,, 1 4 1 6	1 3 1 5
garblings 1 2 1 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Zanzibar, 1 4 1 4 3 GINGER, Jam., fine per owt. 90 0 200 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
TURKEY, pick.gd. to fin. ,, 6 5 9 10	5 0 9 0 3 0 5 15	Ord. to good ,, 57 0 80 0	50 0 80 0
in sorts , 1 15 3 5	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	African , 20 0 21 0 Bengal , 17 0 17 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Gedda , 1 10 1 17	1 14 1 19	Malabar , 0 0 0 0	0 0 0 0
AUSTRALIAN , 1 18 2 9	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Cochin, 34 0 112 0 PEPPER, Blk, Malabar, per lb. 0 $3\frac{3}{4}$ 0 $4\frac{1}{4}$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
AssarceTida,cm.to fin , 1 8 3 0	0 13 3 5	Singapore, $0 3 \frac{1}{8} 0 3\frac{1}{8}$	$0 \ 3\frac{1}{8} \dots \ 0 \ 3\frac{5}{8}$
Sumatra 1st & 2nd , 5 10 . 16 10	5 17/6 14 0	White Tellicherry ,, 0 0 0 0 Cayenne , 1 4 3 1	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
3rd , 2 10 5 12/6	3 4 3 10	MACE, 1st quality, 1 10 2 8	1 11 2 10
Benguela ,, 3 5 6 0 3 10	$\begin{bmatrix} 6 & 0 & \dots & 6 & 15 \\ 4 & 0 & \dots & 5 & 0 \end{bmatrix}$	2nd and inferior, 1 0 1 9 NuTMEGS, 78 to 60 to lb., 3 5 5 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
s. d. s. d.	s. d. s. d. 0 61 . 0 9	90 to 80 ,, ,, 2 11 3 4	3 0 3 8
Manillapercwt. 16 0 24 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
DAMMAR, pale , 85 0 0 0 Singapore , 65 0 70 0	75 0 80 0	VARIOUS PRODUCTS.	v = , v 12
EUPHORBIUM , 0 0 0 0	9 0 15 0	COCHINEAL— Honduras, blackper lb. 0 0 0 0	2 2 2 6
GALBANUM per lb. 0 0 0 0 GAMBOGE, pckd. pipe per cwt. 200 0 250 0	$\begin{bmatrix} 0 & 9 & \dots & 1 & 3 \\ 190 & 0 & \dots & 260 & 0 \end{bmatrix}$,, silver ,, 0 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
GUAIACUMper lb. 0 7 1 6	1 8 2 5	,, pasty ,, 0 0 0 0 Mexican, black ,, 0 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
KINGper cwt. 65 0 105 0 KOWRIE, sorts 30 0 48 0	81 0 . 8 0 18 6 . 43 0	,, silver, 2 2 2 4	1 11 0 0
selected ,, 105 0 177 6	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Teneriffe, black, 2 2 2 11 , silver, 2 1 2 3	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
MASTIC, pickedper lb. 2 6 3 0	4 0 5 0	SOAP, Castileper cwt. 25 0 43 0	33 0 34 10
ord. to fair ,, 50 0 145 0	80 0 130 0	SOY, China ,, gall. 1 10 2 0 TERRA JAPONICA-	2 0 0 0
OLIBANUM, p. drop	47 0 50 0	Gambier per cwt. 16 0 16 3	16 6 16 9
garblings ,, 30 0 36 0	12 0 28 0	Cutch, 23 0 26 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
SENEGAL , 0 0 0 0	60 0 65 0	WAX, BEES, English , £0 0 £0 0	£0 0 0 0
SHELLAC, Orange ,, 72 0 88 0	64 0 78 0	East India ,, 6 0 6 10	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
THUS Liver ,, 64 0 73 0	62 0 70 0	VEGETABLE, Japan ,, 2 16 2 19	2 8 2 10
TRAGACANTH, leaf ,, 200 0 360 0	240 0 400 0	WOOD, Dre, Barperton 3 10 0 0 Brazil, 13 0 45 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
in sorts ,, 70 0 190 0	25 0 175 0	Cam, 15 0 23 0	24 0 34 0
CILS. £ s. £ s.	£ s. £ s.	Fustic, Cuba, 0 0 0 0 Jamaica, 7 0 7 10	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
SEAL, paleper tun 28 0 0 0	32 10 33 0	Logwood, Campeachy, 7 15 8 5	8 5 8 15
brown , 23 0 24 0	30 10 32 0 28 0 29 0	Honduras , 6 15 7 0 St. Domingo , 5 10 6 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
SPERM	73 0 0 0	Jamaica, 6 0 0 0	5 5 5 15
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DR. HUGHES ON INFINITESIMALITY.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

IR,—In your journal of the 15th inst, you reproduce some criticisms de in one of the medical journals on my lecture on "Homœopathic ology," of which you had given an account. I had missed seeing the ice to which you refer; and even had I done so, I fear that there would be been no chance of my obtaining space for reply in the journal in ich it originally appeared. Knowing that I may expect more fairness on a part, I trouble you with these few lines.

dy critic has indulged himself in some curious and interesting chmetical calculations, and I have no intention of questioning their array. I would only point out that they have not the least practical aring upout he question of the medicinal employment of the attenuations in which he deals. They cannot impugn the practicability of their precation, for the least acquaintance with homeopathic pharmacy shows at only 30 bottles, each containing 100 minims of menstruum (i.e., 00 minims), are required to make the 30th dilution. Nor can they prove the presence and effectiveness of a drug thus diluted. To do this must either be demonstrated that matter is not divisible to such an extent, experiment must ascertain that after a certain degree of attenuation all iou of a drug ceases. Such an experiment, I need not say, must be carried twith many substances and on many subjects, if it is to be of value in idding the question.

The object of my lecture was to show that we of the school of the mann have made this experiment on a large scale, and are convinced the results in favour of the preparations in question.

I am, sir, faithfully yours,

RICHARD HUGHES.

April 21.

April 21.

THE PATENT MEDICINE TRADE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir, -Co-operative stores being the order of the day, why should not the emists and patent-medicine proprietors combine and form one of their n for the supply of specialties? Let the leading owners of proprietary icles establish a warehouse by means of shares taken up hy themselves the chemists of the United Kingdom-with the understanding that the de only is to be supplied—who shall furnish these preparations to the blic at the advertised prices only, any chemist selling under price to be used further supplies; co-operative stores, cutting grocers, and licensed bers to be ignored. By this means it is quite in the power of makers of cialties to control the trade and keep it in its legitimate channel. Such move would doubtless affect the present patent-medicine warehouses, ne of whose historical names I should be sorry to see disappear; but as s through these sources that stock is obtained by those who have dono injury, it is clear that the only way to protect the trade is to deal ectly with the retailer, or organise some such system as the onc ighly sketched out. It is quite possible that one of the old houses would found willing to transfer their business to such an association if the portunity only offered.

Yours truly, W. P.

PRICE OF DRUGS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—The subject of uniformity of prices is one that has been frequently ought under the notice of the trade, and to some effect, as shown in the ne of price-lists by some provincial associations.

Cannot this be further extended by the compilation of a list under the ited auspices of these bodies?

As it is, some considerable variation exists. I have two lists now before in which I find the following difference in prices:—

s. d. Acid hydroc, dilut. .. 0 3 dr. and 0 6 dr. 0 8 ,, " pyrogallic 0 4 ,, ٠. .. 1 0 oz. and 2 0 oz. tannic .. •• Calc. phos... 0 6 " .. 0 4 ,, ٠. • • ٠. Chlor. hydrat. 2 0 ,, .. 1 0 Chloroform •• •• .. 1 3 Potas, bromid. 0 3 dr. .. 0 6 I need not continue these quotatious, as these will suffice to show the strability of united action in securing uniformity of price. Perhaps on

our large associations will take the matter up. Yours respectfully,

AN EASTERN COUNTIES' CHEMIST,

EXCHANGE OF PHARMACIES.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sin,—It has struck me that there must he many chemists and druggists who would like a little diversity to the monotony of their lives, and who would have no objection to a run down into the conntry during the coming summer, hnt who, not altogether caring to go to the expense of a substitute, fail to see how the thing is to he hrought ahont. How would it do, then, to try a change of duties after the mauner of clergymen? Say that Mr. Smith, of Huntshire, would like to go to London, and that Mr. Brown, of London, desires to go anywhere out of the great city; could not these two gentlemen arrange to change places for a week or two hy advertising in your columns of Exchange?

S. G.

[We are quite willing to receive advertisements of the character suggested in our Exchange Column. We fear, however, our prospects of wealth from that source are somewhat remote. Our imagination pictures the fastidious West-end ehemist taking charge of an agricultural business for a month, and ealling that a holiday. The converse is not much more attractive. Perhaps it would not be a bad notion to compel the Pharmacentical Council to take an annual turn around various pharmacies with a view of comhining instruction with recreation.—Ed. C. & D.]

27/37. Mr. E. Butler, of the Island Medical Office, Jamaica, writes thus:—
"In answer to 11/39 in February number, I should recommend him to lay out his 30l. in quiniæ disulph., as sure of sale, and easily packed in his baggare.

Answer to 71/6, January, 1879. Try

Gamboge	 • •	 	 	 4 oz.
Sand	 	 	 	 8 oz.
Sp. meth.	 	 	 	 ½ pint.

Macerate four days, and add O. O. Opt. 1 pint, and stand in a warm place, with frequeut stirring until the spirit is evaporated.

To 230/65. January. I send the formula used by the workmen at Enfield in the conversion of the old rifles into Sniders, but the mixture used has as much relation to a fine colour as ink bears to a good hand-writing. Browning for gun-barrels:—

Spt. æther. nitros	 • •		 	f. 3 j.
Sulphur cahbalum	 		 	3 j.
T. ferri mur	 		 	f. 3 ij.
Hyd. perehlor	 		 	3 ss.
Cupri sulph	 		 	3 iss.
Acid nitric	 	• •	 	f. 3 j.
Acid hydrochlor	 		 	f. 3 j.
Aqua	 		 	3 xl. (40)

28/27. G. C. S.—Opening in South Africa.—Diplomas are not essential. But no one is likely to succeed there, or in any other colony, unless he has a good constitution, capacity for hard work, ready adaptability to circumstances, and a talent for turning the hand to anything and everything.

27/30. Lemonade.—It is not convenient to make lemonade in a gasogone, but it is quite simple to mix some lemon or other syrup with the aërated water drawn from a gasogene. The proportions for charging a gasogene (3 pints) are: Acid tart, xtls, 3 vj., sodæ bicarb. 3 vij. 3 i. For other sizes proportionate quantities.

30/45. S. N. D.—Poisonous Patent Medicines.—The Pharmacy Act (section 16) exempts from its foregoing provisions "the making and dealing in patent medicines," so that the recent judgment does not affect that business. These may be prepared or sold by any person, qualified or not, whether they contain poison or not. It is, however, the following section (17) which requires certain formalities to be observed in the sale of poisous, and we have no doubt that anyone, chemist, grocer, or limited company, who should sell a patent medicine containing a preparation of optium, for example, if the hottle, box, or vessel containing the said poison did not bear the label "poison," with the name and address of the seller, would be liable to the penalties prescribed in that section.

6/25. Wilf.—Chartreuse.—The following formula for this liqueur (the yellow variety) is given with much detail as to the general preparation of liqueurs in Spon's "Encyclopædia of the Useful Arts," part 4, lately published:—Lemon halm, 250 grammes; hyssop (flower tops), genepi, and angelica seeds, of each 125 grammes; angelica root, Soeotrine aloes, and cardamoms (small), of each 30 grammes; arnica flowers, China, cinnamon, mace and cloves, of each 15 grammes; coriander seeds 1,500 grammes; alcohol (85°), 42 litres. Digest for 24 hours, distil, and rectify to obtain 40 litres; add 25 kilos, of refined white sugar, previously dissolved in 24 litres of water; make up to 100 litres with water, and colour yellow with saffron.

32/26.—Lemonade.—(I.) It is as impossible to remove the odour of oil of anise as the sweetness of sugar. (2.) See above. (3.) The title "wholesale druggist" may be used by an unregistered person without infringing the Act.

24/34. Formulæ of Perfumes.—C. R. Avery (Brooklyn, U.S.) asks for the formulæ of essence of gardenia, oriental drops, opopanax, bananier, and quatrefleurs.

19/30. **Sound Figures.**—*E. N.* would be glad to know where he can find a description of the apparatus used hy Mr. Sedley Taylor for the observation of sound figures as exhibited upon a film of soap.

31/32. J. T. D.—Stomach Bitters.—We cannot guarantee the following to be the particular product to which you refer, but we think it is similar:—

3I/22. H. O. W.—Good Soft Soap.—We do not know if there is any better recipe for making good soft soap than that of the British Pharmacopæia. Perhaps, however, that is rather too good for you. Hemp seed oil is said to be the best to use next to olive oil. Fish oils are sometimes used for common soft soap, but as these give a yellow soap, a due proportion of indigo is afterwards worked in so as to produce the usual green. Many samples of soft soap are adulterated with glue and other substances. For a good description of the various processes of manufacture adopted in this country and abroad see Urc's Dictionary.

7/34.—NilDesperandum.—Cod Liver Oil.—The following process is stated in Bentley and Redwood's "Materia Medica" to be adopted by Messrs. J. Bell & Co. A similar process is followed, we believe, by several of the other chief houses. "The livers are obtained as fresh as possible, and, after careful inspection, all the inferior ones are removed, and the remainder are carefully cleaned, cut open, and washed two or three times in cold water. They are then exposed to a steam heat of about 180°, and occasionally stirred until all the oil has risen to the surface. This is filtered, and afterwards exposed to a temperature of about 50° in order to congeal the more solid fat (margarine). The oil is then filtered, and kept in jars well secured from the air."

Oak Varnish.—Clean pale resin, $3\frac{1}{2}$ lbs.; oil of turpentine, 1 gallon; dissolve. To this is sometimes added Cauada balsam, 1 pint.

Carfax.—Pulvis Liquiritiæ Co. Ph. Germ.—The formula is published in the German Pharmacopæia, and in most of the larger works of reference. It is as follows:—Senna and liquorice root powdered, of each two parts; fennel seed (powdered) and washed sulphur, of each I part; white sugar (powdered), six parts. Mix.

28.58. W. C. D.—Ringworm.—This is occasioned by a parasite called the trichophyton and it occurs mostly in children insufficiently fed, or dirty. The object of any treatment must be to destroy the fungus, at the same time giving nourishing diet and tonic medicines. The hair should first be removed from the vicinity of the affected part, and to do this thoroughly a simple depilatory of lime and carbonate of soda, of each 1 part, mixed with lard, 30 parts, may be employed. Then a lotion should be applied once or twice a day, composed of 1 part of corrosive sublimate in 250 parts of water, or 1 part of sulphurous acid iu 8 parts of water.

5/25. Paste for Tin.—H. Kemp, Horncastle.—You do not tell us what kiud of paste you have been using. On page 188 of the Diary for 1879 you will find all we can tell you on the subject.

36,62. Pharmaceutical Latin Dictionary.—W. B.—Pereira's "Selecta & Prescriptis" is the only work published which gives the technical meaning of the Latin used in prescriptions, hut its arrangement is inconvenient. Cassell publishes a very fair Latin English dictionary at 2s, 6d.; Smith's smaller Latin dictionary at 7s, 6d. is an excellent work, while his "larger" dictionary at a gninea is, perhaps, the best we have handled. Neither of these, however, would give the present meaning of the words and phrases used in prescriptions.

Election of Pharmaceutical Council.—We have received a letter for publication from Mr. Gilbert Thonger (Harborue) advocating the election of Dr. Symes, and expressing the writer's personal esteem for that gentleman,

7/33. J. E. B.—Terra Dumnata is an old alchemist's term used to signify the residuum after the distillation of any mineral. We never heard as a synonym Terra Sacratissima. What to give a enstomer who asks for such a commodity would depend on the object he had in view.

7/23. Ellis asks:—Will any reader kindly give me a formula for dentists' composition (pink) for taking impressions of the month?

Dispenser.—Your criticisms on the Art of Prescribing, which appeared in our last, are very long, and do not (so far as we can see) add any practical item to our knowledge. We cannot help admiring your wouderful fluency, but we cannot spare space for its exhibition. The results of your experience, told concisely, would probably be of some interest.

3/33. Register.—The point raised is a very fine one, and seems capable of argument on both sides. Our opinion one side or the other could have no effect, but we should think the difficulty need not be insuperable of getting your certificate signed by some other medical practitioner or magistrate.

AN INTERCEPTED LETTER.

WE have no intention of explaining how the following came into our possession. It satisfactorily shows, however, that good influences are being exercised to maintain the dignity of the Pharmaceutical Council:—

You asked me, dear Tomkins, the last time you wrote, To give you the tip as to how you should vote. In the forthcoming Council election next May: So patiently listen and observe what I say.

In the first place, you know, there is danger abroad That the snug little parties which met round our board In those halcyon days when the critics were mute, And before our supremacy suffered dispute, Will be utterly ruined if the intrigues should grow, Planned and fostered by Jones, Barclay, Reynolds & Co. Our majority's rapidly thinning away, And troublesome matters turn up every day; The Birmingham gang would have us degrade Our dignified souls with questions of trade; THE CHEMIST AND DRUGGIST spots every mistake, And we have friends in the provinces too wide awake. Then two of our best men have thrown np the sponge,—S. C. Betty was one; oh, how he would plunge And spit fire like the dragon when roused by St. George, Lash himself into fury, and his enemies scourge In speeches all dotted with Latin quotations, Like maps of the Underground Railway and stations! Then C. Hanbury, too, as Saint (not Doctor) Paul Would remark, for this world, has forsaken us all. So be careful, dear Tomkins, most careful, I pray, How you vote, and for whom, uext 19th of May.

Mr. Atkins? Of course; he's the right sort of stuff—
How he gave it those specials when they cut up so rough!
Divine rights of Councillors: Those are his views;
Mr. Atkins of Salisbury's a man you must choose.
Bottle, Mayor of Dover? He's a little uncertain,
But generally a Tory, so I don't think he'll hurt in.
But generally a Tory, so I don't think he'll hurt in.
But, of Mayfair? Well rather—who better?
You may usually trust them when W.'s their letter.
Churchill carries the mark of the Birmiugham beast,
If he is not sacrificed we can't be appeased,
And until from its fatal embrace they withdraw
The same rule must apply to both Woolley and Shaw.
Put a thick line through Hampson; this is very important—
He advocates pretty near all that he oughtn't.
We don't want to lose either Cracknell or Savage,
And Rimmington's votes we must duly acknowledge,
Not for threats nor temptations, not for rubies nor gold,
Would we turn our loved Robbins out into the cold.
Likewise, notwithstanding his solitary craze, a
Club like ours is imperfect without Daniel Frazer.
Whatever you do, don't send Richardson here—
That we've neglected the trade, he makes it appear;
He would prove, I am afraid, a provincial bold prophet
(It's true what he says, but we don't like to be told of it).
It bink yon had better reject Mr. Symes—
It's clear he inclines towards liberal crimes.
You can do as you please about Mr. Johu Owen,
He votes for us mostly, so I think he might go in.
The moustrous andacity of Robert O. Fitch
In presenting himself is almost too rich.
Why, the man lives at Hackney! He mnst be aware
Tbat we don't know that district at Bloomshury Square.
But we might be allowed to know what is best
For the East-end of Town as well as the West.
Theu, lest he should give us some tromble, I think
We had better avoid Mr. H. N. B. Spink.
Mr. Hopkinand Williams, of course, you'll leave in—
It would be the most deadly pharmaceutical sin
To strike out his name. And there's much to admire
In the two dark West-enders, Horncastle and Squire.
Their qua

And, now, to prevent any sort of confusion,
Allow me, dear Tomkins, one word in conclusion.
You know what a ucryous terror I feel
Lest the Council should ever become ungenteel.
We're a fashionable learned society now,
With our annual swallow-tailed soirée; so how
Can we he expected to muddle and mix
Our serene contemplations with trade politics?
Bear this well in mind, we are trusting to yon,
Aud believe me, yours faithfully, THOMAS TRUEBLUE.

AN ALLEGED ENGLISH QUININE FRAUD.—Professor Landerer, of Athens, has sent to the editor of the Archiv. der Pharmacie a specimen of a salt sold as quinine in Greece, which has been largely pushed in that country, and which contains no trace of quinine, but is pure sulphate of cinchonine. The label bears the name of "William Stevens, London,"

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IANUFACTURING WHOLESALE & EXPORT CHEMISTS. BIRMINGHAM.



Lavender

reference to the announcement of MESSRS. W. R. WARNER & Co., on p. 63. Detailed Price Lists of the Formulæ in stock are now

ready, and will be supplied on application. The advantages claimed for WARNER'S PILLS are that they are uniformly and carefully prepared, thoroughly soluble, and in every way satisfactory.

The attention of the Trade is asked to BERDOE'S LAVENDER WATER, of Triple Strength. This article has proved itself worthy of appreciation, and is really well prepared and in good condition. Price per Large Bottle, 4s. 9d.; half ditto, 2s. 5d. (Bottles contain about, or more than, twenty fluid ounces.)

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digestion ver Complaints suralgia iatica riter's Cramp ss of Voice

Asthma Bronchitis Paralysis Epilepsy Rheumatism Gont Constipation

Local Debility General Debility Female Complaints Mental and Physical Weakness Functional Disorders &c., &c.

This is no conjecture, but an established scientific fact, and it must be imitted that PULVERMACHER'S GALVANIC CHAIN-BANDS, by pplying this electrical deficiency, constitutes Nature's most congenial irative in the ailments referred to, embodying a host of remedies in one.

Thirty years' snocessful experience has proved the marvellous remedial owers of these appliances, even in cases defying ordinary treatment.

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5s., 10s. 6d., 15s., 18s., 22s., and 40s.

BROAD CHAIN-BANDS or BELTS for Lumbago, Indigestion, Liver, Chest, and Nervous Complaints, &c., wearable as a Belt.

22s., 30s., 40s., and 50s. BROAD CHAIN-BANDS for Nervous Deafness, Head, Tooth, and

THE CONTINUOUS VOLTA-ELECTRIC CURRENTS, rendered most A conveniently self-applicable by recent improvements of these Chain-Bands, although applied externally, penetrate to the innermost organs, promoting digestion, circulation, and nutrition, and perform their recuperative

moting digestion, circulation, and nutrition, and perform their recuperative and restorative work in a silent, natural way, devoid of the costliness, nncertainty and inconvenience of ordinary treatment, or of any unpleasant sensation or shocks, counter-irritation, &c.

Even a Five Shilling Band of the minimum electric power evinces its genuineness by deflecting a telegraphic needle at many miles' distance, whilst those of superior price and power produce all the physical, chemical, and physiological phenomena possessing the famous curative powers of the voltaic battery, enhanced by their great portability.

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Forest Rose Hawthorn Guards' Bouquet Heliotrope	Honey Suckle Lily of the Valley	Magnolia May Blossom	Moss Rose Spring Flowers	White Rose Clove Pink			
The above I	Perfumes at per 20 o	zs. 11/-; 10 ozs.,	5/7; 5 ozs., $2/1$	0.			
Classic Frangipane Curious Essence Gem of Toilet Ess. Bouquet Geranium Fleur d'Oranger Girl of the Per Jasmin Flowers of Eden Jockey Club	Kuhli-Kuhli	Mignonette Millefleurs New Mown Hay Oh! How Sweet Opoponax Patchouli	Queen of the Alps Rondeletia Santal Something New Stephanotis Sweet Briar	Tuberose. Verbens Wallflowers West End Wild Flowers Wild Rose Ylang Ylang			
The above Perfumes at per 20 ozs. 9/6; 10 ozs., 4/10; 5 ozs., 2/6.							
Aromatic vinegar per 20 ozs.	6/9 * Ess. Musk (strong)	per 20 ozs. 15/6	Spent Pomade (French)	per 20 ozs. 1/-			

The above Ferrumes at per 20 dzs. 9/0; 10 dzs., 4/10; 5 dzs., 2/6.	
Aromatic vinegar . per 20 ozs. 6/9 * Ess. Musk (strong) per 20 ozs. 15/6 Eau de Cologne (super) * Ess. Ambergris	$\frac{1/2}{1/2}$

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Price per 100, per 500.

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N				s. d.		d.	No.			8.	d.	s. d.	No.					s. d.		. d.
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36	., (Colocynth, et Hyoscy	ami,				57.	11	Ext. Belladonnæ 1	gr 1	0	4 3			Cathartic (Cholag					9 3
0	1''	B.P			9	3	58.	19	Ext. Nuc. Vomicæ	½ gr 1	0	4 3	79.	,,	Eccoprotic					9 3
37	., (Conii Comp. B.P.		1 3	5	6	59.	11	Ferri Iodid	2	0	9 3	89.	22	Laxativa			2 0		9 3
		Ferri Carb. B.P				6	60.	,,	Morphiæ Sulph. 1	gr 2	0	9 3						2 3		0 6
39	11	Hydrargyri, 3 gr. B.P		1 3	3 5	6	61.	21	Neuralgic	8	6	_	82.	22	Tonic			2 (,	9 3
40	,,	Hydrarg. Subchlor, Co	B.P.	1 3	5	6	62.	22	Opii, Camph. et Ta	nnin 2	3	10 6			Hydrarg. 5 grs.			1 6	;	
41	1,]	pecac. cum Scilla, B.	Ρ	1 3	5	6	63.	,,	Podophyllin, ‡ gr.	1	0	4 3			Iodide of Mercury					4 3
42	12	Plumbi cum Opio, B.	P	2 0	9 5	3	64.	,,	Podophyllin Co	2		9 3			Cathartic Co.					6 9
43	,, (Quiniæ, 1 gr.†		7 0	34	3	65.	12	Quin. et Ferri et St	rychniæ 5	0				Diuretic			1 6		
		Saponis Comp. B. P.				3	66.	2.1	Quiniæ Sulph. 2 gr	.† 13	8	67 7	87.	,,,	Ferri Pyrophos, 1	gr.	. 1	1 3	3	5 6
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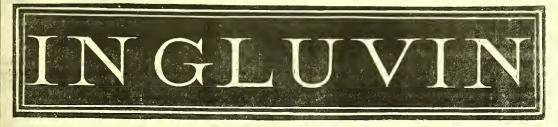
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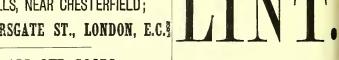
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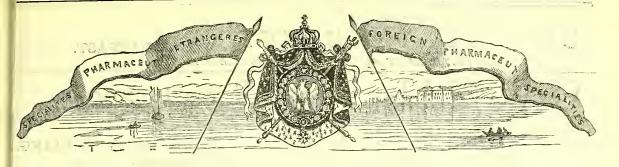
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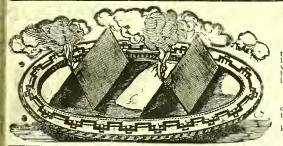
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DIRECTIONS.—Fold and place one or two pieces of paper on a dish, and light the
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haling it for a few minutes the air-tubes will be cleared of mucus, difficult respiration
will cease, and the patient will fall into a sound and refreshing sleep. The outer air must
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This remedy is advertised in the Lancet and British Medical Journal; it is therefore known to members of the Medical Profession, by whom it is recommended.

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INDEX TO ADVERTISEMENTS,

See pages 53, 54.

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Carefully freed from all animal matter, stearine, &c.; very pale; does not deposit, and remains sweet for any length of time.

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IMPORTANT NOTICE.

13 King Street, Cheapside: April 25th, 1879.

"SIR,—Permit us to call your attention to the recent Judgment of Vice-Chancellor Sir James Bacon, in the Action of Von Heyden v. Max Neustadt & Co., referred to in our previous Circular. By the Judgment, which is reported in the several Daily Papers of the 24th instant, the validity of the Plaintiff's (Professor Kolbe's) Patent has been established, and a perpetual Injunction has been granted, restraining the Defendants, Max Neustadt & Co., of No. 55 Mincing Lane, E.C., from selling Salicylic Acid, and from using Professor Kolbe's invention, and from parting with the possession, otherwise than to the Plaintiff, of any Salicylic Acid manufactured according thereto as may be in their possession. The Defendants are also ordered to account for all profits derived by them from the sale of Salicylic Acid manufactured as aforesaid, and to pay to the Plaintiff the amount of such profits and the Costs of the Action. This decision establishes Dr. Von Heyden's monopoly to manufacture and sell Salicylic Acid in this Country.—Very obediently yours,

VAN SANDAU & CUMMING, Solicitors for Dr. Von Heyden."

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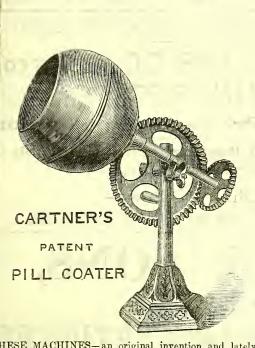
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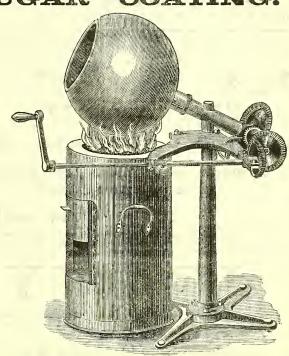
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No. 1 to Coat up to 1 lb. No. 3 " " 3 lb. ... PRICES: No. 5 12 lb. ... £5 5 ...

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I have tried your "PATENT PILL COATER" with a success much greater than I expected. My first attempt with Pil. Rhei. Co. 1 lb. quite astonished a labout ten minutes they were finished almost equal to the best I have seen. With a little practice I see no reason why a novice should not be let to produce a perfectly Coated Pill at a cost of almost nothing.

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I am pleased to inform you that the "PATENT PILL COATER" I purchased of you a fortnight ago answers admirably, the Pills coated by it being ual to any I have ever had. With my first trial I was pleased, and, after using it the third time, I found it surpassed my greatest expectations. I we no doubt it will soon be found in the establishment of every chemist and druggist.

W. KING.

Your "PATENT PILL COATER" is such an acquisition that I would not be without it. Coating is such an improvement, that I am surprised chemists we been so long and are so slow in adopting it fully. Nothing could be more satisfactory than your invention.

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I beg to recommend Mr. Cartner's "PATENT PILL COATER" as the most perfect article of the kind. I have tried numerous arrangements, but none equal it in any way. It is a neat, convenient, and reasonably priced machine, and coats heautifully.

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We select a few of the many Testimonials we have been favoured with, which we have pleasure in submitting for perusal.

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From J. A. STEWART, Esq., M.D.
Orchard House, Pencaitland, Feb. 16th, 1874.
I have tried your Liq. Secalis Ammon., and have pleasure in reporting set favourably of its action. It is speedy, sure, and reliable in its results, d is by far the safest and most pleasant, as also the most certain form Ergot I have ever met with, and a most valuable remedy for those practioners who have large Obstatric practices. ioners who have large Obstetric practices.

From D. G. ASTLEY, Esq., L.F.P.S.
Newcastle, Staffordshire, March 30th, 1874.
I have great pleasure in testifying to the efficacy of your Liq. Secalis nmon. I have used it in an extensive Midwifery Practice for several ars, and with the same satisfactory results. I know of no preparation Ergot so RELIABLE.

From J. R. NUNN, Esq., M.R.C.S.

For some time I have used your preparation, Liq. Secalis Ammon., and we always found it to answer admirably, and is so much more pleasant a patient to take. This preparation I consider a great boon to the stetric Practitioner.

From W. JOHNSTON, Esq., M.D.
Clay Cross, Derbyshire, July 19th, 1874.
I have great pleasure in testifying to the efficacy of your Liq. Secalis mmon. in all Obstetric cases where uterine action proves sluggish and sufficient, through deblity of constitution. In my experience it TAKES UGGEDENCE OF ALL THE OTHER PREPARATIONS OF FROGT in its rapidity of tion upon, and power of augmenting, uterine contraction.

From W. WOODWARD, Esq., M.D., L.R.C.P. Lond.
Worcester, June 23rd, 1874.
Kindly send me another bottle of your Liq. Secalis Ammon. You may member I hesitated to use it, having preferred the powder to all other reparations I had ever tried. However, after having nsed all you sent le, I can truly say it is a most valuable preparation, quite equal to the wader, and of course is a much less inconvenient form, to say nothing of the powder being often inert on account of want of care in keeping it.

From THOMAS WILTSHIRE, Esq., L.R.C.P. Sheffield, May 27th, 1875. I have used your Liq. Secal. Am. for the last two years, and find it to be MOST RELIABLE PREPARATION.

From R. CLARK NEWTON, Esq., M.R.C.S.
Newcastle-on-Tyne, June 28th, 1875.
I consider your preparation of Ergot (Liq. Secalis Ammon.) THE BEST have administered. It is quick and efficacious in its action, and I have eldom known it vomited.

From ALFRED HOOPER, Esq., M.R.C.S.

Newhall, Burton-on-Trent, Sept. 1st, 1875.

Your Liq. Secalis Ammon, is the best preparation of Ergot I have ever sed. It is REMARKABLY CERTAIN, SAFE, AND QUICK in its results. I have edd various forms of liquid extract of Ergot, and began to despair of btaining a thoroughly reliable one. Yours, however, has raised my rooping faith, and I have great pleasure in bearing my testimony in its avour.

From P. SCOTT, Esq., M.R.C.S.
Mansfield, Nott., August 30th, 1875. Having had a large Obstetric practice for forty years, I can with pleasure peak most highly of your Liq. Secalis Ammon. AS THE MOST SAFE AND ERTAIN FORM OF ERGOT YET INTRODUCED, and can with confidence recomnend it to practitioners.

From J. A. LYCETT, Esq., L.R.C.P. Lond.

Ablow House, Wolverhampton, July 12th, 1875.

As the administration of powdered Ergot is inconvenient, I, some time ago, was induced to try your Ammoniated Solution, which I still use, finding it very efficacious, due presumably to the medicinal property being more soluble in the presence of an alkali. From my experience I can with pleasure recommend it as a very good preparation.

From T. F. HALE, Esq., M.R.C.S.
Staveley, Derbyshire, June 14th, 1875.
With reference to your Liq. Sccalis Ammon., I have now used it several years in a very extensive Midwifery practice, and with UNFAILING results; I prefer it to any other preparation I have yet met with, and it is equally efficacious in all cases where Ergot is generally found useful.

From THOS. L. GENTLES, Esq., L.F.P.S.
Wellington House, Derby, October 9th, 1875.
It affords me much pleasure to testify that I have given Messrs. Richardson's preparation of Ergot a fair trial, and I find it THOROUGHLY EFFICIENT and RELIABLE.

From Drs. LAMB and KISSEN.

11 Charlotte Street, Hull, April 27th, 1876.

In an extensive Midwifery practice we have given your Liquor Secalis Ammon. a good trial, and find the preparation to answer more speedily and effectually than any other we have tried. In prolonged and tedious cases the stimulating effect is very marked, enabling nervous and timid patients to take fresh heart, and so mentally to assist the already enfeebled patient.

patient.

From E. B. EVANS, Esq., L.R.C.P., M.R.C.S., &c.
St. Thomas, Swansea, June 8th, 1877.

I am bound to say that no other preparation of Ergot that I have tried can be compared with yours for producing the effect desired by the administration of that drug. I have used it largely for the last few years in Obstetric practice, and have found it, without exception, speedy in its action, pleasant to the patient, and equally efficacious in producing nterine contractions both and natural made new transful.

action, pleasant to the patient, and equally efficacious in producing nterine contractions both ante-partum and post-partum.

From C. E. MONRO, Esq., M.R.C.S. Eng., L.R.C.P. & L.M. Edin.

I cannot speak in too high terms of your Liquor Secalis Ammon. In a recent difficult case of post-partum hamorrhage it acted marvellously, after the FAILURE OF OTHER ERGOT PREPARATION. It no doubt SAVED THE PATIENT. It is a VERY VALUABLE PREPARATION, and one which ought to be known and generally used.

From JOHN BLACKBURN, Esq., M.R.C.S., &c., Surg., Beckett Hospital.

Ivy House, Barnsley, Feb. 2nd, 1876.

Will you send me the same quantity of Liq. Secalis Ammon. as I had before. I have always had a prejudice against this preparation, having used it several times without producing the desired effect; but after using that of yours, I feel bound to acknowledge that it is everything you say of it; and in every case I have used it I have always felt that its action was speedy and sure.

From WM. FLUS. From M.R.C.S.

speedy and sure.

From WM. ELLIS, Esq., M.R.C.S.

Morley, near Leeds, Jannary 3rd, 1876.

The Liq. Secalis Ammon, has always been very decidedly beneficial in its results. I have administered it frequently and in large doses of two teaspoonfuls in water, and never witnessel in one instance any injurious effects. I believe, from experience, that a large dose of Secale should always be given, when that medicine is required. A second dose is never required.

From W. L'HEUREUX BLENKARNE, Esq., M.R.C.S.

Blenkingham, Sentember 20th 1877.

Buckingham, September 20th, 1877.

After having given your Liq. Secalis Ammon. a long trial, I can speak in the HIGHEST PRAISE OF IT, and I never go to a confinement without some of it in my relate. some of it in my pocket.

The above Liquor is put up in $\frac{1}{4}$ -lb., $\frac{1}{2}$ -lb., and 1-lb. Stoppered Bottles. Price 3s., 5s., and 8s. 6d. each.

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As originally introduced by A. P. Towle, and free from stamp duty for dispensing.

4 ozs., 4s.; ½ lb., 5s. 6d.; 1 lb., 10s.

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AND JUJUBES

In 1, 2, and 4 lb. Bottles, at 3s. per lb., and 6d. and 1s. Boxes. Foiled, Lined and neatly got up for the counter, 4s. 6d. and 9s. per doz.

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This Preparation is made by our Special Process from the rich quilled Bark of Cinchona Succirubra, and it contains the whole of the Alkaloids in chemical combination with their Natural Acids as they exist in the Bark. One ounce is equivalent to one ounce of the Bark.

It has been introduced by us to meet the demand which has recently sprung up for Red Cinchonae Bark in this country and the United States as a

NEW

Possessing as our Preparation does all the active principles of the Bark on which its efficacy depends, and being made from true quilled Red Bark of fine quality, we can with confidence recommend it for the purpose indicated, more especially as good results have already in many cases attended its use.

Dose.—From half a teaspoonful to one teaspoonful in water every three hours, and gradually reduced.

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**NOTE.—An evident error in the formula, as a pint of alcohol would not exhaust a pound of the powdered bark.

* NOTE .- An evident error in the formula, as a pint of alcohol would not exhaust a pound of the powdered bark.

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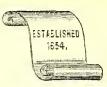
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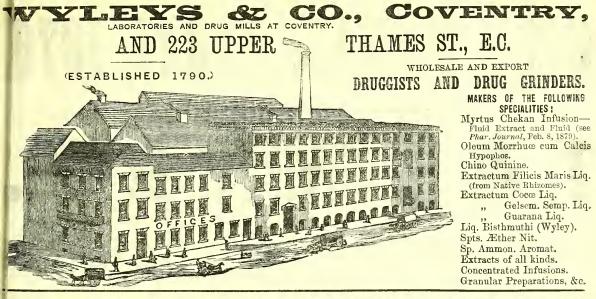
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The following Paper by HENRY DEANE, F.L.S., and HENRY B. BRADY, F.L.S., was read, amongst others, at the Bath Meeting of the British Pharmaceutical Conference, September 1864:—

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The striking appearance resulting from the evaporation of Battley's Sedative (Plate III., Fig. 1) first drew our attention to the mode of investigation we described. We have examined it frequently and always have met with the same characters. The slides present an almost opaque mass of crystals of orphine salts and codeine, with a very small portion of narcotine (and meconic acid?), and so far as we have observed, complete absence of resinons atter and narceine. Anyone who has studied the microscopic characters of this preparation will readily understand how it has kept its place with the ofession in spite of the cheap imilations which have been so largely puffed as substitutes for it. Though we have experimented much with a view to eparing a similar liquor, we have not yet arrived at an identical result. Of three makes which we have examined, one (Plate III., Fig. 5) is largely larged with resinous matter, and the proportion of crystalline constituents is so minute that we are satisfied its activity must be very small; another late III., Fig. 4) gives a few morphine crystals, a good deal of narcotine, and more narceine; a third (Plate III., Fig. 6) is chiefly remarkable for its of everything crystalline.

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IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD, and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the

Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the Medical Times, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation;

nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

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The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:-

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Newbery & Sons,	London.
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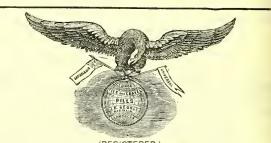
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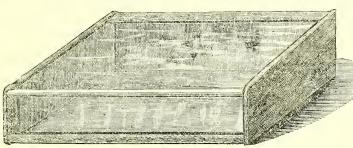
SIMPLE, ELEGANT, AND USEFUL,

IN WHICH

ECONOMY, TASTE, AND DURABILITY

HAVE BEEN CAREFULLY COMBINED.

18/6



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espectfully call the attention of Shopkeepers, and all partics who are desirous of displaying their goods to the greatest advantage, to their

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Jnequalled in Price; Made of Solid Mahogany and French Polished;
Polished Plate-glass Top and Front 4 inch Thick.

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Among the many advantages combined in this useful and inexpensive Show Case we may mention that it is so made that two or ny number may be placed together, to occupy full length of counter if required. It is made 24 in. long, 18 in. wide, 8 in. high it back, and 7 in. in front. A Bright Burnished Silverdine Bar has been introduced in front, which has an excellent effect; does not change colour; is always bright and merely requires dusting. The back of Case is hinged to open, and secured by a Brass Spring Catch. The bottom of Case is covered with Blue Leatherette.

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Attention is drawn to the description on the Crucibles below, and in ordering these particulars should be given to prevent errors and disappointments.

BATTERSEA ROUND.

Stamped as on Illustration. $\frac{1\frac{7}{8}}{2\frac{3}{8}}$ £0 5 0/6В 3 0/6£0 0/6 1/0 0.6 57 71 81 33 43 53 7 33 0 0 1/0 H 0 BATTERSEA 5 K M WORKS. 6 2/0 6 ROUND. 0.15 3/6 Q 12 0 17 The above 9 sizes form one nest. Price 50 0 per dozen nests. Any size can be had separately.

BATTERSEA TRIANGLE.

Stamp+d as on Illustration.

No.	Height, inches Width, inches	Crucibles, per doz.	Covers, per doz.	No. Height, inches Width,	Crucibles,	Covers, per doz.	
S U W Y	4½ 4½ 3½ 3½ 2½ 2½ 2½ 2½	£0 2 0 0 1 1 0 0 8 0 0 5	1/0 0/9 0/6 0/6	$\begin{array}{c cccc} T & 4 & 3\frac{3}{4} \\ V & 3\frac{1}{4} & 2\frac{7}{4} \\ X & 2\frac{1}{2} & 2\frac{1}{4} \\ Z & 1\frac{3}{4} & 1\frac{3}{4} \end{array}$	£0 1 6 0 0 10 0 0 6 0 0 4	1/0 0/9 0/6 0/6	BATTERSEA WORKS TRIANGLE
nest.	Price 4/2	sizes forr per dozen e had separ	nests.	The above nest. Price 3 Any size can	/2 per dozen	nests.	

The BATTERSEA ROUND and TRIANGLE forms are particularly well suited for packing, being made to nest, ensuring great economy in freight and shipping charges.



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With or without apertures.



	1	Long.	Wide	,	High,	Pi	rice,	1	I	ong		Wide,		High,	P	rice,
No.		in.	in.		in.	per	doz.	No.		in.		in.		in.	per	doz.
A.		7	 31		$2\frac{1}{2}$		12s.	G.		11		4		31		213.
					$2\frac{7}{8}$											
C.		8	 43		3 ີ		18s.	J.		12		6		4		33s.
D.		81	 5		31		21s.	K.		14		8		5		488.
E.		9	 51		3 🖁		248.	T.	•	15		9		6		545.
					4				••	20	•••		•••			

Sizes A to F are suited for the Furnaces of the same letters.

H to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &c.

SCORIFIERS.

(PER GROSS.)

		(
Inches Dia	ım.	Price,	Inches Diam.	Price.
1		 3s. 0d.	23	6s. 0d.
11		 3s. 6d.	3	7s. 6d.
$1\frac{7}{2}$		 4s. 0d.	31	9s. 0d. \P.P.C.C.
2		 4s. 6d.	4	10s. 6d.
21		 4s 6d.	5	12s. 0d.
21	• •	 5s. 0d.	1	

ROASTING DISHES.

		D	iam.			1		Diam	l.	
P.F.C.C°	No.		in.		Per doz. 1s. 3d.	No.		in.		Per doz. 1s. 9d.
P.P. C.C	2	••	3	••	1s. 6d.	4	••	5	• •	2s. 0d.

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THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

	THES	EARE.	PERFEC	ILI ONG	oin, a	ND OF	Ine CC	RELECT	ronosiii.
			Diam.		I	Height,			
No.			in.			in.			Per doz.
A.			11	• •		11		••	
в.			11	• •		11		• •	2s. 0d.
C.			$1\frac{1}{2}$	• •	• •	11/2	• •	• •	2s. 0d.
D_{\bullet}			13	• •	• •	2	• •	• •	2s. 0d.
			Cove	rs for ei	ther siz	ze, 6d. p	er doz		



2.—FOR COPPER. CORNISH FORM AND QUALITY.

Nest of Two $\left\{ \begin{array}{ll} 3\frac{1}{4} \text{ in, high, 3 in, diam.} \\ 2\frac{1}{2} \end{array} \right\} \begin{array}{ll} 2s. \text{ per doz.} \\ 2single \end{array}$ Single ... 2 , ... $2\frac{1}{8}$, ... 1s , ... All Forms and Sizes can be had.

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COMPANY RUCIBLE

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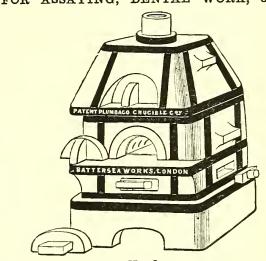
For MELTING GOLD, SILVER, COPPER, &c.



No. 1.

Melting Furnaces	Diam.	Height	For a Morgan's Patent Crucible	Price
No. A B C D E F	in. 91 93 11 133 142 18	in. 17½ 20 22 26 28 32	No. 2 4 6 8 12 16	£ s. d. 1 0 0 1 5 0 1 10 0 2 5 0 3 0 0 4 0 0

FOR ASSAYING, DENTAL WORK, &c.



No. 2.

Muffle Furnaces	Diameter	Height	Furnace
No.	in.	in. 24½ 25½ 25½ 27 28½ 29½ 30	£. s. d.
A	125		2 0 0
B	135		2 5 0
C	145		2 10 0
D	155		3 0 0
E	161		3 10 0
F	172		4 0 0

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RED OR WHITE. BATTERSEA

ROUND.



P.P.C.CS

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FLAT, WITH EARS.

P.P.C.C.

Diam. 1 in., height 4 in., 1/6; 5 in., 2/ per dozen.

11 in., height 4 in., 1/6; 5 in., 2/ per dozen.

12 in., 4 in., 2/; 5 in., 2/6; 6 in., 3/ per dozen.

2 in., 4 in., 2/6; 5 in., 3/; 6 in., 4/; 7 in., 4/; 8 in., 4/6;

9 in., 5/; 10 in., 6/ per dozen.

2 in., 4 in., 3/; 5 in., 3/6; 6 in., 4/; 7 in., 4/6; 8 in., 5/; 9 in.,

6/; 10 in., 8/; 11 in., 12/; 12 in., 16/ per dozen.

3 in., 5 in., 4/; 6 in., 5/; 7 in., 5/6; 8 in., 6/; 9 in., 7/;

10 in., 9/; 11 in., 12/; 12 in., 16/; 13 in., 17/ per doz.

Diam. 3½ in., height 6 in., 5/6; 7 in., 6/; 8 in., 7/; 9 in., 7/6; 10 in., 9/; 11 in., 12/; 12 in., 18/; 13 in., 18/ per dozen.

4 in., 6in., 6/; 7 in., 6/6; 8 in., 8/; 9 in., 9/; 10 in., 10/; 11 in., 14/; 12 in., 18/; 13 in., 19/ per dozen.

4½ in., 7/; 8 in., 8/6; 9 in., 10/; 10 in., 12/; 11 in., 16/; 12 in., 18/; 13 in., 19/ per dozen.

7 in., 8/; 8 in., 9/; 9 in., 12/; 10 in., 14/; 11 in., 16/; 12 in., 20/; 13 in., 20/ per dozen.

FLAT, all with Ears except those Numbers with

No.	Hght.	Width	Depth	Price	No.	Hght.	Width	Depth	Price	No.	Hght.	Width	Depth	Price	No.	Hght.	Width	Depth	Price
1*	41	25	11	4/	15*	65	4	11	8/	29	63	41	ğ	8/	43	51	3	1	6/
2	41	24 21	黄	4/	16 17*	6 1 7 7	4 8 6 3	1 1	10/	80 81	6½ 71	6½ 5¾	1	14/	44	8 1	7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	20/
4	42	27	#	4/	18*	81	$5\frac{7}{8}$	21/8	18/	82	81	51	i i	14/	46	5 8	41/2	î	8/
5 6*	4 t	2 t 2 t 2 t 2 t 2 t 2 t 2 t 2 t 2 t 2 t	4 3	4/	19*	107 148	68 8	11/8	24/ 36/	33 34	81 71	71	13	20/	47	6	63 37	17	12/
7	47	23	g g	4/	21	5 8	31	- £	6/	35*	45	23	16	4/	49*	43	33	$\frac{1}{1}\frac{3}{6}$ $\frac{1}{1}\frac{3}{5}$	6/
8	4.3	23	18 16	6/	22	7 45	4 27	1 3	12/	36 37	5.4 5.4	4 ½ 3 §	18	8/	50* 51	41	41/8 35	11	8/
10	5 to 1	2 g	11	4/	24	45	45	7	8/	38*	6	4	13	6/	52	6 53	33	1	G/
11	4 8	8	1 2	6/	25	4 ½	5 8	7 8	10/	39*	45	23	1 8	4/	53 6	48	88	1-3	6/
12*	5 52	3 3 g	4 3	6/	26 27	5 ¥ 4 \$	$\frac{4\frac{1}{8}}{2\frac{1}{2}}$	1 5	8/	40 41	48	37	4	6/	54*	41/3	41	114	\$/
142	44	41	1 3	8/	28	68	34	1	8/	42*	61	4	H H	84	!	1			

ALL SIZES MADE TO ORDER.

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NEAVE'S FOOD

FOR INFANTS AND INVALIDS,

Is pre-eminently rich in albumenoids and phosphates, and the starch which it contains is in a state readily assimilated by the infantile digestion.



NEAVE'S FOOD has received the high and unqualified approval of eminent medical men for many years past. It commands a ready sale, for it is strongly recommended by mothers to the notice of their lady friends; and infants often give it a preference, refusing other foods. As a natural result, the sale has extended rapidly, especially during the past four years, necessitating the erection of extensive premises, again enlarged in December, 1876, where the preparation is carried on under the personal supervision of Mr. NEAVE.

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Fine China B	lended	Tea,	Magenta	Label		•••	•••	•••	Retail at	2/0 per 1	b.
Finest "	,,	"	Blue	,,	•••			•••	,,	3.0 ,,	
Fine Indian	,,	"	Green	,,	•••			•••	"	2/6 ,,	
Finest ,,	5 2	,,	Yellow	,,	• • •		•••	•••	,,	4/0 ,,	

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NESTLE'S MILK FOOD is highly recommended by the best medical authorities in all parts



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NESTLE'S MILK FOOD is put up in Tins, packed in lined cases when ordered specially for he Export Trade. Is highly concentrated, and in a perfectly dry state. Will keep good in any climate.

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Its freshness in warm climates, where cow's milk soon becomes tainted.

Our Wholesale Agents at any port will pack and ship the Food to or for any part of the world.

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No. 1, 13|- per lb.; No. 2, 11|6 per lb.; No. 1, 5|9 per lb.; No. 2, 4|9 per lb.; No. 3, 9|6 per lb.

PACKED IN SMALL BOXES, 1s. per lb. EXTRA.

For the Immediate Production of Fine and Pure Coffee.

Owing to completed improvements in its manufacture

now specially prepared for use in hot climates, and is Guaranteed not to become oxydised nor fermented in any change of temperature. It is economical in use, there is no waste, and its permanent stimulant properties are more valuable than those of alcohol. Sold by all chemists in bottles at 1s. and 2s. each.

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Who will ferward Samp'es by post on application. Also, Brown Cough Lozenges, 2s., 2s., 2d., 7 ibs. stamped with name free.

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LOZENGES. Net Cash. To Acct. d. 6 s. d. 2 8 2 Plain Black Currant, old square 2 2 в 8 rough oval Black Current and Ipecacuanha 2 6 2 8 ō Black Current and Tannin .. 3 3 3 3 3 Black Current Voice (warm astringent) 3 Black Current Cough Lozenges 3

(Ipecac, and Morph., strength as "B. P.") In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size. From EDWARDS, London; through any Wholesale House; and from the Manufacturers, ESTABLISHED 1843.

Confectioner, Wholesale & Export

AND MANUFACTURER

MEDICATED LOZENGES, REFINED LIQUORICE, JUJUBES, &c. PAVEMENT, CONEY ST., & COPPERGATE, YORK.

Lozenges of all descriptions made from Customers' private formulæ (or ingredients) and stamped with name if required.

LIST OIV APPLICATION. PRICE

The use Powder, c

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Raspberry Beer Powder, nitation whatever, is ille

Beer

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Mixing all descriptions of Powders, heavy or

ADVANTAGES.

These Machines are specially adapted for mixing Powders of all descriptions, either in small or large quantities, and are the most rapid and efficient Mixers in use. They can be used either with or without the cover, are portable, require no fixing, and can be readily taken apart when necessary.

Powders which contain contain contain and a second contains a contain and a second contains a contain contains and a second contains a contain and a second contains a contain and a second contains a contain a contai

Powders which contain concrete lumps are easily reduced, and in no ease need the ingredients pass through the machine more than once.

The larger sizes discharge the contents by withdrawing a slide in the bottom of the Mixer.

CAPABILITIES.

For CHEMISTS and DRUGGISTS they prove invaluable for mixing all kinds of Powders, such as Cattle Drenehes, Horse and Cow Spices, Baking and Egg Powders, Sherbet, Lemon Kali, &c. &c.

Price List and Particulars on application to

P. H. BRACHER, 77 HIGH STREET, WINCANTON.

THEGREAT DISCOVERIES.

BIRD'S

DELICIOUS

RASPBERRY BEER POWDER

Produces Raspberry Beer like the flavour of the fruit, clear, bright, and sparkling, at 3½d. per dozen 1/2-pint bottles, including all cost.

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REFRESHING

LEMON BEER POWDER

Makes this favourite summer beverage, Lemon Beer. A 4d. packet is sufficient for three and a half bottles. It is alike suitable for the healthy and the convalescent.

BIRD'S GINGER BEER & POP POWDER

any infringement Produces Ginger Beer, Sparkling and Effervescing; its fresh Lemon and Ginger Flavour is unsurpassed; it is used by thousands, and preferred by all; it is soon in perfection, and is made quicker than by any other method known. A packet will make two gallons. of



See Trade Mark - a Watch and a Loom, with Motto, Punctuality and Perseverance, on each Packet. Write for Testimonia's and Opinions of the Press, also further Testimonials.

Prepare I only by F. BIRD, Chemist, Coventry. PRICE, 27s. and 36s. PER GROSS; also in 3 & 6 doz. Boxes.
Wholesale Agent, W. MATHER, London. N.B.-SPECIALLY PACKED FOR EXPORTATION.

Best Birdseye, in $\frac{1}{4}$ lb. tins; also $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. packets. Superfine Birdseye, in $\frac{1}{4}$ lb. tins; also $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. , Imperial Birdseye, Foil, 2 oz., 1 oz.

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This Tobacco is the most highly estcemed in the States.

In $\frac{1}{4}$ lb. tins; Foil, 2 oz., 1 cz.

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Oriental Returns, In 4 lb. tins; also A Mild Smoking Tobacco. Foil, 2 oz, 1 oz.

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PACKED SHAG.

Superfine Shag $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. Fine Shag $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. Fine Ragg $\frac{1}{4}$ lb., $\frac{1}{8}$ lb., $\frac{1}{16}$ lb. $\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb. Good Shag "Old Honest" $\frac{1}{8}$ lb , $\frac{1}{16}$ lb., $\frac{1}{32}$ lb. ••• "Uncle Tom" $\frac{1}{8}$ lb., $\frac{1}{16}$ lb., $\frac{1}{32}$ lb. ("Aunt Chloe" $1b., \frac{1}{16} 1b., \frac{1}{32} 1b.$

MANUFACTURERS,

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ESTABLISHED ONE HUNDRED AND FIFTY YEARS.

F. BIRD, of Parliament, by

article, and the originator registered, and Pritry, the discoverer

Title

The

PURE FLOUR OF EGYPTIAN LENTILS,

IN TINS OR IN BULK.

ESSEX FLOUR AND GRAIN COMPANY, LIVERPOOL ROAD, LONDON, N.

BROOK & CO.'S DANDELION COFFEE

IS the Best and the Cheapest, containing three times the strength of ordinary Coffee. The above is highly recommended by the Medical Faculty as an Agreeable, Palatable, and Medicinal BEVERAGE. See Reports from Dr. Hassall, M.D., Author of "Food and its Adulterations," &c.; also, Otto Hehner, F.C.S., Analyst. Sold in Tins, 6d., 1s., 1s. 9d., by most respectable Chemists. Wholesale Agents: Goodall, Backhouse & Co., Leeds; Wm. Mather, London; Jas. Woolley, Son & Co. and W. Mather, Manchester; H. Glover, Son & Co., Bradford; and all Wholesale Houses.

Caution—See you get BROOK'S, as inferior qualities are often substituted.

MAKERS—BROOK & COMPANY, 76 HANOVER STREET, MANCHESTER.

3d. WRIGHT'S 3d. GINGER BEER POWDER

IN THREEPENNY PACKETS ONLY,
Sufficient for Three Gallons of Fine Sparkling
GINGER BEER.

Considered to be the Best Preparation of its kind known.

Is warranted free from anything injurious to health, will keep good for months in any climate, and, on comparison, will be found the cheapest and most saleable in the market.

Be particular to order "WRIGHT'S," and have no other.

Put up in 1-doz, Packets and 3-doz. Boxes (with attractive label for window), price 24s. per gross, less the usual discount.

PREPARED BY

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WHOLESALE AND FOR EXPORTATION.

QUALITY AND STRENGTH GUARANTEED.

Put up in best style in Plaid Boxes, 6s. per doz. Fancy Gold ditto, 7s. Gold, Enamelled, and Embossed, best hinged ditto, Gold Labels, &c., 7s. 6d. per doz. Ginger Beer and Lemonade Powders, 5s. per doz. Soda Powders, 3s. Sherbet, 7-lb. Bags, 8d. per lb. Chlorodyne, 6s. per lb.; W. Qts., 5s. 6d.

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CARLTON WORKS, HULME, MANCHESTER, AND 1 FINSBURY CIRCUS, LONDON,
MAKER BY STEAM POWER OF MEDICATED AND HIGH-CLASS LOZENGES OF EVERY KIND.

Boiled Sugars, of the Finest Quality, Packed for Home or Export.

Fragrant Bouquet Lozenges, 100 in an Ounce, have an immense sale.

SUGAR WORM CAKES,

Keep in any Climate, give great satisfaction, and have an increasing demand, especially in Africa and Australia. Put up in Tins, each containing 6 Dozen or 12 Dozen Cakes.

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Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

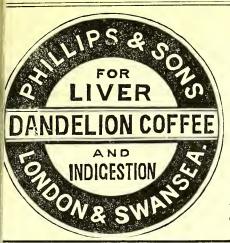
6 Broken Wharf, Upper Thames St., London.

LAZENBY & SON'S PICKLES,

Sauces, and Condiments.—E. LAZENBY & SON, Sole Proprietors of the Celebrated Receipts, and Manufacturers of the Pickles, Sauces, and Condiments so long and favourably distinguished by their name, beg to remind the Public that every article prepared by them is guaranteed as entirely unadulterated.—92 Wigmore Street, Cavendish Square (late 6 Edwards Street, Portman Square), and 18 Trinity Street, London, S.E.

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admirers of this Celebrated Sauce are particularly requested to observe that each bottle prepared by E. LAZENBY & SON bears the label used so many years, signed "ELIZABETH LAZENBI."



ESTABLISHED 1760.

Contains three times the strength of ordinary Breakfast Beverages.

TRIED ALWAYS USED.

The valuable properties of the Dandelion Root, recognised by eminent Physicians for many centuries, has now become an article of daily use. Sold by all Chemists throughout the Kingdom in Tins at 1s. 6d., 1s., 9d., and 6d.

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SPECIAL TERMS TO MERCHANTS AND SHIPPERS.

etails of Ininction granted V V.-C. MALINS ill be found in Chemist and ruggist," Febuary 15, 1877, page 76.



Wholesale Price Lists, Opinions of the Press, and full information will at all times be given direct, or through the Patent Medicine Houses.

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PRING & AUTUMN HEALTH SALINE.

Neatly put up in 6d. and 1s. Packets. Very salcable.

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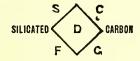
A MOST EXCELLENT DENTIFRICE.

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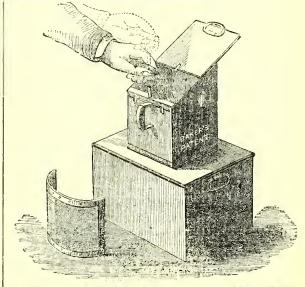


Prize Medals-PARIS, 1867. HAVRE, 1869.

DOPTED, IN PREFERENCE TO ALL OTHERS, by A the Admiralty, and used in the General Post Office, the London and rovincial Hospitals, and many Public Establishments in various parts of

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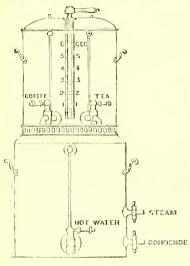


BAKER'S PATENT MIXING & SIFTING MACHINES.

Having recently made important improvements in our Mixing and Sift ing Machines, adding several large sizes to those formerly manufactured (samples of which were shown and practically tested at the Pharmaceutical Meeting, on February 5, 1879, we are now able to offer to Chemists, Druggists, and Manufacturers the most efficient means for sifting and mixing the largest or smallest quantities. Five sizes are manufactured, from "No. 1," holding 1 lh., to "No. 5," holding 1 cwt.; or special sizes made to order. The Machine (No. 2) represented is the most convenient and practical for Retail Chemists, holding 7 lbs, and the receiver 21 lbs. Large quantities may he sifted and mixed with this machine in a few minutes, and a perfect mixture obtained without dust and annoyance being experienced; or a few ounces can he done when required. By the addition experienced; or a few ounces can he done when required. By the addition of our late improvements we are able to use finer sieves than by any other process, and therefore to produce a finer and more initmately mixed powder. Price List and particulars on application.

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Apparatus for making Extracts of Substances by Steam Pressure, for the use of Largo Establishments, Steamers, Hotels, Coffee Taverns, Restaurants, and Cafés; also for Chemists to make Extracts or Infusions of Substances.

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On the same principle for Family use.

Great Economy, Excellent Aroma, Perfect Safety. and Cleanliness.

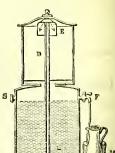
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24 Cliff Street, New York. MAYNARD,

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BROKEN-LEAF TEA, 1s. 8d. per 1b.

A Money-saving Tea, absolutely pure, in half-pound packets 10d. The small leaf from fine India and China Teas, stronger, richer, and cheaper than any whole-leaf tea. Wholesale to Dealers and Sellers and Agents. 40 lbs, sent free to any railway station in the kingdom.—WALKER & DALRYMPLE. Warehouses—Lf4 and 155 Whitechapel Road, London, P.O.O. payable at Head Office. Bankers—The National Provincial Bank of England. N.B.—Samples posted free.

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Pure Cocoa only, with the superfluous oil extracted.

This pure and delicious Cocoa, consisting exclusively of choice Cocoa Nibs from which the superflueus oil has been extracted, is strongly recommended to all who appreciate the full flavour and fine aroma of Cocoa.

"If properly prepared, there is no ulcer or more wholesome preparation of Cocon."—Food, Water, and Air, Edited by Dr. HASSALL.

J. S. FRY & SONS, BRISTOL & LONDON.

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FRY'S CARACAS COCOA.—" A delicious preparation.

THE ANTI-RUST.

For Preserving from Rust, Polished Steel, Iron, or Gun Metal. In Tins 1s. each. Wholesale, 8s. doz.

THE MARBLE RENOVATOR.

For Cleaning Marble Chimney Pieces, Washstands, Slabs, &c.

May be had of Messys, Barelay & Sons, Farringdon Street; Crowden & Garrod, Falcon Square, London; and of all Birmingham and Sheffleld Factors.

SOLE MAKERS-

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LA TROBE'S PURE SOLUBLE COCOA.



Supplied to Chemists only, all other Trades refused.

H. L. T.'s production stands entirely upon its own merits, as the Purest Cocoa manufactured.

That the Trade may have an opportunity of testing, H. L. T. sends samples for gratuitous distribution amongst the medical profession upon receiving from Agents a list of same.

Retailed in Canisters,

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La Trobe's Pure Soluble Cocoa.

Also Manufacturer of

La Trobe's Highbury Bouquet, La Trobe's Constitution Powder,

La Trobe's Cough Lozenges, La Trobe's Plate Powder.

Price List, with Terms, on application to

H. LA TROBE. COTHAM, BRISTOL. 20SE'S

MEJUICE

ROSE'S

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Preserved by a Process under Royal Letters Patent.

ESSRS. ROSE & CO., as the original Manufacturers and Patentees of the LIME JUICE BEVERAGES, prepared from the West India Lime Fruit, now so favourably known as supplying delicious, wholesome Beverages, highly medicinal, preserved without the aid of spirits, beg to caution buyers against the now numerous imitations of these Beverages, more especially of their LIME JUICE CORDIAL, by Rectifiers, Wine Makers, and others. As protection against such, Messrs. ROSE & CO. have adopted Glass-stoppered Bottles, engraved with the Lime Fruit as Trade Mark, specially manufactured for them, and registered—(as represented on margin)—the Labels also bearing the signature of the Firm. Purchasers are respectfully requested to order ROSE'S LIME JUICE CORDIAL, and other Beverages, as noted below, to protect themselves further against such imitations.



LIME JUICE MERCHANTS AND PATENTEES, REFINERY. 11 Curtain Road, Finsbury, At LEITH, SCOTLAND.

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SOLD EVERYWHERE, BY WINE MERCHANTS, GROCERS, CONFECTIONERS,

OSE'S LIME JUICE CORDIAL

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OSE'S PREPARED LIME JUICE

OSE'S LIME HIIGE CHAMPAGNE

In Water, or in Soda, Potash, and Aerated Waters, supplies a delicious beverage, effectually quenching thirst, cooling and refreshing the system. It will be found particularly agreeable blended with Spirits, supplying a delicious stimulant, equalling the finest Liqueurs, sustaining and invigorating; also forming an excellent substitute for the Lemon as a flavouring in hot drinks, &c.

Is another form of the Lime Juice Cordial, combined with Ginger. Supplies an excellent stomachic. May be drank alone, or in water, or blended with Spirits. As a drink for the cold season it will be found particularly agreeable in hot water.

Is the Refined Juice of the Lime Fruit. It is used for the same purposes as the Lemon, to which it is much superior as a medicinal agent, and its acidity considered more agreeable.

This agreeable Sparkling Wine, free from Spirit, and retaining all the valuable medicinal properties of the Lime Fruit, has attained a high position in public estimation, and is highly recommended for its whole-some and medicinal properties. Furnishing a delightful and refreshing draught, it is particularly adapted for the Ball-room, Soiree, and Evening Parties. In Champagne Bottles, Quarts and Pints.

NOTE.—As these Beverages are entirely free of Spirit (see Analytical Reports below), no Licence is required for their sale.

ecommended by the "Lancet," the "Food Journal," the "Scientific Review," and other eminent Journals, for purity and excellence. REPORTS ON APPLICATION.

ANALYTICAL MEDICINAL PROPERTIES: -Anti-Scorbutic; beneficial in Rheumatism, Indigestion; and a Purifier of the Blood.

> SPECIAL EXPORT TERMS.

The increasing demand for Export of these excellent and eminently wholesome Beverages establishes their success as a hipment to all the warmer latitudes. The LIME JUICE CORDIAL particularly is recommended for such shipment.

L. ROSE & CO., 11 Curtain Road, LONDON.

ESTABLISHED 1843.

THOMPSON & CAPPER.

WHOLESALE & EXPORT

HOMŒOPATHIC CHEMISTS,

55 Bold Street, Liverpool,

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NEW ILLUSTRATED PRICE LIST

THOMPSON & CAPPER have recently purchased the long-established business of HENRY TURNER & CO., Manchester, which they now carry on under their own name.

THOMPSON & CAPPER'S DENTIFRICE WATER

Is kept by T. & C.'s Agents throughout the world.

PRICE CARD ON APPLICATION.

COAT YOUR OWN PILLS,

Full particulars of a quick and easy method, with every detail of the process explained in a Pamphlet, entitled—

"HOW TO COAT PILLS."

Free to any address on receipt of 2s., by the author—

THOMAS HAFFENDEN,

MONTPELIER PHARMACY, BRIGHTON, ENGLAND

EARP & CHASTER,

RUNCORN,

Makers of PURE NITRIC, HYDROCHLORIC, and SULPHURIC ACIDS.

PURE '880 LIQUOR AMMONIA, &c.

Quantities of five dozen Winchesters delivered free within fifty miles. Goods for Export delivered free on Board Liverpool. Being the only makers near the port of Liverpool, E. & C. can offer great advantages to Shippers to America.

ESTABLISHED 1857.

GRANULAR

ESTABLISHED 1857.

EFFERVESCENT MINERAL WATER SALTS.

For the preparation of artificial waters, these Granular Effervescent Salts are especially suitable. They give a refreshing draught, and may be relied on as presenting at the same time the chemical ingredients of the natural waters. It is obvious that in this form the Granular Effervescent preparations present many advantages over the waters themselves. Whilst all the constituents of the natural springs are reproduced, the Salts are extremely portable, more economical, and with them a sparkling refreshing draught is procurable in any quantity at any time. Among the Mineral Water Salts thus prepared may be named, Carlsbad, Kissingen, Pullna, Seltzer, Vichy. In each case a tea-spoonful of the Salt in a tumbler of water will produce a draught similar in effect to the natural water. The Seltzer Water has been long recognised, both in this country and in Europe, as an excellent tonic and mild aperient. A bottle of the Granular Efferve-

long recognised, both in this country and in Europe, as an excellent tonic and mild aperient. A bottle of the Granular Effervescent preparation of this Salt is a great addition to the dinner-table, as a small draught of the wholesome and refreshing beverage prepared from it, and taken during dinner, is both agreeable and beneficial.

Sold by all Chymists, in Bottles at 1s., 1s. 6d., and 2s. 6d. each. Also in larger ones for family use.

BISHOP'S

GRANULAR EFFERVESCENT CITRATE OF MAGNESIA.

A perfectly white, and delicately clean preparation, prepared from salts obtained from the Pure Fruit Juices of Lemons and Grapes.

The best chymists in Great Britain and the Colonies keep no other "Granular Effervescent Citrate of Magnesia" than "Bishop's." The reason for this universal preference is that, since its introduction in 1857, it has been found that none of the Imitations of this preparation, originally introduced by Mr. Bishop, have been able to compare with it in reliability as a medicine, or in purity and freshness of flavour as a cooling drink. Full directions on each bottle.

Dr. A. H. HASSALL cautions the profession and the public to select carefully only preparations of known composition and ascertained purity, for there is no class of remedies which is liable to a greater diversity of composition and quality than the effervescent granular preparations; adding that he is able to state futher that all constituents entering into the composition of Bishop's several preparations are pure and of excellent quality.

Each Bottle will bear the Namc on the Seal, the Trade Mark on the Label, and full address of

ALFRED BISHOP, Manufacturing Chymist, 17 Speck's Fields, Mile End New Town, London.

HOT WEATHER! RINK AND WHAT T

MORE OR LESS SPECIFIC ANSWER TO WHICH QUESTION will certainly throughout the coming summer not unfrequently be desired of Chemists by their customers, especially in sea-side towns, where, to the sitors thereto, it commonly happens that the change of air and water, supplemented very frequently by undue exposure to solar eat, renders the possession of a perfectly wholesome and corrective refrigerant remedy a decided desideratum, and for the proper ulfilment of which requirement we venture to think it will be readily allowed that the use of the ordinary effervescent compounds ce utterly unfitted and unscientific, possessing, as they uniformly do, the double disqualification of alkalinity and more or less of argative property.

"Acting as a purgative by occasioning a considerable discharge of serous fluid into the intestines, which effect when often repeated casions debility of the digestive organs, and consequent emaciation."—Dr. Paris.

Before, therefore, recommending for more than very occasional use effervescent preparations of the class uniformly composed f Tartrate of Soda with varying proportions of Sulphate of Magnesia, &c., the fact should never be lost sight of that they exert also powerfully alkaline effect, which, when for some time continued, most certainly impairs nutrition by causing a serious loss of pagulable power in the blood—a depravation, it will be unnecessary to remark, especially typical of scurvy and other vitiated onditions.

It will, therefore, we think, be sufficiently obvious that the novel combination of the salutary principle of lime fruit—to the ntire exclusion of Tartaric Acid-with effervescent properties unalloyed by the usually excessive alkalinity, for the first time

applied in

s such as to render it a general domestic remedy of prime importance, whether it be had recourse to for its gratefully refrigerant and prophylactic properties, or for the more specifically alterative and antiputrescent action of its constituent Lime Juice, which, eing furthermore supplemented by the valuable therapeutic agency of Nascent Oxygen derivable from its potassic component, eaves nothing to be desired to render it physiologically correct as a remedy in the numerous cases where, from imperfect xygenation consequent upon excesses in diet or unsanitary conditions of life, the blood has become charged with fermentible arbonaceous matters—a condition it is needless to observe always provocative of functional derangements, as well also as it offers favouring nidus for the reception and development of zymotic diseases.

NOTICE TO THE TRADE.

By the introduction of WENHAM'S LIME JUICE SALINE of the notice of their Customers (which from its unique and attractive ppearance it itself effects when displayed upon the counter), Chemists have he opportunity of considerably augmenting their returns by the sale of his entirely novel and elegant preparation, which—to enumerate some it is advantages f its advantages-

Possesses in a complete and portable form the valuable anti-scorbutic, alterative, and general healthful properties of Lime Juice and Potash;

Rendering it in the highest degree a remedy at once palatable, refreshing, and health-sustaining;

Which, with a total absence of qualities whereby its range of usefulness can be limited, as in the case of purgative and obviously weakening Tartrates of Soda, &c.,

Supply important desiderata that, considered in connection with the unapproached intrinsic value of the article.

Amply warrants the assumption of its obtaining the decided approval of the Public wherever introduced.

"35 Baker St., W., July 9th, 1878. "DEAR SIRS,—I think your Effervescent Lime Juice Saline is well made, and should hecome very popular as a contribution to 'Elegant Pharmacy,' as well as a cooling beverage during the heat of summer. You will be pleased to hear that we have just sent a consignment of it to H.M.S. Monarch, Cyprus.—Yours faithfully,

"A. W. POSTANS, F.C.S."

"Troop Steamer, Dublin Castle, Cape Town, 15th March, 1879.

"Dear Sirs,—In the hurry of embarkation, on 19th of last mouth, at Gravesend, I had not time to thank you for the box of Effervescent Lime Juice Saline you so kindly placed at my disposal, for use of officers and men emharked for the Cape. I now do so, and can testify to its having proved a hoon to those who felt in any way indisposed, especially to those suffering from sea-sickness. The demand for it was so great that your liberal supply soon vanished. I can safely say, from personal experience during voyage, that it is not only most refreshing, hat also tends to allay sea-sickness, and I am sure would be also useful in febrile diseases.

"Accept my thanks, please.

"Cigingal" FDW I BOULTON Surgery Major."

" (Signed) EDW. J. BOULTON, Surgeon Major."

IMPORTANT TO SHIPPERS.

LIME JUICE SALINE has most successfully been introduced with a view to obviate the difficulty of obtaining really reliable Lime Juice under any hut very exceptional circumstances. In the condensed form, now for the first time presented to the public, the difficulties attendant upon its use and transport in the liquid condition are wholly obviated; and by a combination of the most recherché qualities, together with an entire freedom from the lowering effects of ordinary saline compounds, a remedy is provided which requires but a single trial to offer the most convincing proofs of its immense usefulness.

"21 Eccleston Square, S.W. " September 12th, 1878.

"Gentlemen,—Should Lime Juice be proved to he an efficacious remedy for Scurvy, the palatahility and 'readiness for use' of your prepa-ration will render it invaluable in all future Arctic Expeditions.

"I am, Gentlemen, very truly yours,

"A. H. MARKHAM, Captain R.N."

Captain A. H. MARKHAM was Commander of H.M.S. Discovery in the recent Arctic Expedition.

"Aylesbury Pharmacy, 11th Nov., 1878.

"Messrs, Wheeler & Co., I sold out of your L. J. Saline on Monday last, and have got in a fresh supply, which makes my third case. I lately recommended it to a gentleman, who was so especially pleased with it that, upon the occasion of his purchasing a second bottle, he assured me that he should spare no pains to make known its virtues amongst his numerous friends. From the trial, therefore, which I myself have made, and the testimony I have received from my customers, I can confidently affirm it to be the best preparation before the public or the trade.

I am, Gentlemen, yours faithfully, JOHN TURNER."

"Royal Hotel, Durban, Natal, 20th March, 1879.

"Gentlemen,—I intended posting you this when at Cape Town, but we were so suddenly ordered on here that I had not the opportunity of doing so until we reached Durban.

"I am greatly indebted to you for many a refreshing draught during the voyage; indeed the Lime Juice Saline was so popular with all ranks and classes on board that a considerable sum could have been realised by its sale on board the Dublin Castle, and I only regret that it is not to be procured here, as I should be very glad to possess a supply on my departure to morrow to join Colonel Wood's column.

"(Signed) WM. SMITH COX, H.M. Ordnance."

In Bottles, 2s. 6d. and 4s. 6d. each; Cases for Export, 2ls. Sole Manufacturers (Registered),

WHEELER & CO., LONDON, & SOUTHEND-ON-SEA

AGENTS.—Calcutta, Messrs. Bathgate & Co.; Bombay, Messrs. Treacher & Co.; Simla and Lahore, Messrs. E. Plomer & Co.; Allahabad, Mr. J. L. Lyell; Melbourne and Wellington, Messrs. Felton, Grimwade & Co.; Sydney and Brisbane, Messrs. Elliott Brothers; Dunedin, Auckland, and Christchurch, Messrs. Kempthorne, Prosser & Co.; Port Elizabeth, Messrs. N. Adler & Co.

MILLS & CO. BOURNE WATER,

THE PUREST IN ENGLAND.

MILLS & CO., Manufacturers of the Original BOURNE ARTESIAN AERATED WATERS.

BOURNE SODA WATER, unequalled for its natural Alkalinity.

BOURNE POTASH WATER—a Special Remedy for Rheumatism and Gout.

BOURNE LEMONADE—Superior Quality,

BOURNE LITHIA WATER—Specific for the Gout. Guaranteed to contain a fixed quantity of Lithia.

BOURNE SELTZER WATER—The natural Alkalinity of the Bourne Artesian Well Water, combined

with Artificial Salts, produces one of the best articles made.
This Seltzer Water is well adapted for invalids for its purity.
When taken at dinner-time, it promotes digestion,
Early in the morning, slightly aperient.

R. M. MILLS & CO., MANUFACTURERS, BOURNE.

Messrs. Padgett & Son, Wine Merchants, 27 Motcombe Street, and Messrs. Hardy & Co., Chemists. 42 Fenchurch Street, corner of Mincing Lane, Wholesale Agents, London.

And their appointed Agents throughout the Kingdom.

J. H. CUFF'S MINERAL WATERS,

Atkinson St., Deansgate,

MANCHESTER.

SODA WATER SELTZER WATER POTASS WATER 15 grs. LEMONADE GINGER ALE LITHIA WATER 5 grs.

LITHIA WATER WITH POTASS.
QUININE TONIC WATER, &c., &c.

SENT IN BIN CASES, NO PACKING REQUIRED.

Carriage paid on 12 Doz. assorted, or 6 Doz. of one kind.

Priced Lists free on application.

DISCOUNT ACCORDING TO QUANTITY.

SPECIAL TERMS FOR EXPORT ORDERS.

Attention is directed to Cuff's Soda, Seltzer, and Potass Waters, and Ginger Ale (the latter a speciality), all of which command a very extensive and ready sale.

Cuff's Waters are prepared expressly for a High-class Family Trade.

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MINERALWATERS

GINGER ALE (Aromatic).—There is now a large consumption in private families of this very popular beverage, its Aromatic properties and Brillianey of Colour are perfection; part of a bottle may be used, and the remainder if re-corked will keep in perfect condition.

Apneumatic Soda Water. Apneumatic Brighton Seltzer. Apneumatic Potass Water. Apprentic Lithia Water.
Apprentic Aerated Water.
Lemonade.

Dr. A. H. HASSALL, in his recent Analysis, says:—"I have repeatedly Analysed the Aërated Waters manufactured by Messrs. Kinmond & Co., and have always been able to report thereon in terms of the highest praise."

Our terms are more favourable for a family trade than those of any first-class makers.

KINMOND & CO., late J. DAILY & CO., LEAMINGTON.
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Goods forwarded Carriage Paid within 80 miles of Southampton, on Orders of 2 gross and upwards,

Soda, Seltzer, Potash & Aerated Waters supplied in Syphon Bottles.

Importers of Hunyadi János, Friedrichshall, Vichy, Pullna, Carlsbad, and other Foreign Mineral Waters, supplied at Prices which will bear comparison with London Rates.

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PURE AERATED WATERS.

MANUFACTURED BY

T. & F. J. TAYLOR, NEWPORT PAGNELL. ESTABLISHED 1835.

Purity and Excellence of the Water certified by Analysis by PROFESSOR ATTFIELD, Ph.D., F.C.S.

NEWPORT PAGNELL SODA WATER, containing 10 grains of Bicarbonate of Soda in each bottle.

AERATED WATER, without Alkali.

POTASH WATER, containing 10 grains or 20 grains of Bicarbonate of Potash in each bottle.

LITHIA AND POTASH WATER.

SELTZER WATER, prepared according to Analysis of the Natural Water.

EFFERVESCING LEMONADE, superior in flavour colourless, and warranted to retain its brilliancy.

Each Bottle is protected by a Label bearing the Signature of the Firm.

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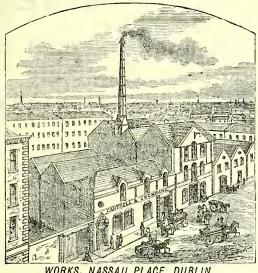
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ARE

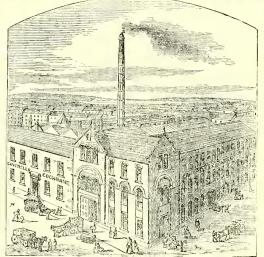
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CANTRELL & COCHRANE,

ORIGINAL MAKERS OF THE JUSTLY CELEBRATED



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CONTRACTORS FOR THE Anchor Steam Ship Company. Montreal Steam Ship Company. Pacific Steam Ship Company.

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The following List of their preparations is worthy of the attention of Chemists:-

AROMATIC GINGER

Cali, or Potass Water. oda Water. eltzer Water. ithia Water.

Lemonade. Summer Beverage. Lime Juice. Lime Juice Syrup.

Aerated Sarsaparilla. Dandelion. Quinine. Carrara Water.

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The Machinery and Appliances used in the Laboratory and Factory for their production are of the most approved construction; e Water and all the Materials used are of the highest degree of purity; and as the greatest care is exercised in their manufacture, ey may be relied on as absolutely free from organic and mineral contamination.

Testimonials from the Medical Profession, from accomplished Analysts, and from Public Men eminent in Literature, sience, and Art, at once give an assurance of the excellence of these Beverages, and show the universal esteem in which they are held.

International Recognition has been given to their merits at various Exhibitions all over the World. Eight Gold and rize Medals have been awarded.

All Goods ordered for Export are specially prepared and packed for their respective destinations, and are guaranteed to tain their qualities unimpaired. Terms and Prices may be obtained on application to-

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PURVEYORS TO HER MAJESTY'S IMPERIAL HOUSES OF PARLIAMENT.

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SODA WATER. SELTZER. POTASH. LEMONADE. LITHIA, &c.

MANUFACTURED BY

JOHN BINGLEY, Pharmaceutical Chemist, NORTHAMPTON.

A copy of Professor Attfield's Report will be forwarded by post on application.

FOREIGN MINERAL WATERS.

FREDERICKSHALL (5 Cases, 6d, per Case less) 24/6 Case, 30 bot... 34/ Case, 60 ½-bot APOLLINARIS (20 Hprs., 1/- per Hpr. less) ... 25/ Hpr., 50 ... 39/ Hpr., 160 ... Humpers free, corrisge paid: Empty Bottles, 6d, per doze, HUNYADI JANOS (10 Cases, ½-bts., 5/- less; 10 Cases, bts., 3/- each less)

ODT MEDD													Саье,		-Dts.
SELTZER	***	***	***	***		***	11/6						Hpr.		11
PULLNA	***	•••	•••	•••	***	•••	18/-	ca⊦e,					Case.		**
VICHY	•••	•••	•••		***	•••	31/-	**	50	**	•••	27/-	**	50	10
CARLSBAD		•••	***	***	***		37/6	••	50	11					
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FINE NORWEGIAN BLOCK ICE.

W. B. HARRISON, Importer of Ice & Mineral Waters, 6 BRIDGE STREET, SUNDERLAND.

"ABSOLUTELY PURE."

SEE ANALYSES. Sent post free on application.

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CRYSTAL SPRINGS.



Soda, Potass, Seltzer, Lemon-ade, also Water without Alkali. For GOUT, Lithia Water, & Lithia & Potass Water.

SHORT RECKONING

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AN AGREEABLE COOLING FEBRIFUGE AND TONIC APERIENT EFFERVESCENT SALT, BEING A CHALYBEATE WATER IN A SOLID FORM,



To be obtained in Bottles, 2s. 6d., from SANGER & Co., NEWBERY & SON, and all Wholesale and Retail Chemists, and from

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J. B. LAMBE & Co. desire to draw the attention of LICENSEES of PATENT STOPPERED BOTTLES to their



MOTTO-DISCS

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OF WHICH THEY ARE THE ORIGINAL MAKERS.

The Article is made of good stout Cardboard, while the Mottoes are numerous and varied, and packed carefully in Boxes of 3,000 each.

These Seal Mottoes are a great convenience, strengthening the cap label, and keeping the lips of the bottle free from dirt.

A Large STOCK is kept, and Orders can be supplied immediately on receipt.

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MANUFACTURERS OF EVERY DESCRIPTION OF LABELS, SHOW CARDS, &c., SUITABLE FOR THE TRADE.

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MANUFACTURED BY

OHN CHALLONER & SONS, BRIGHTON.



And Supplied to the Nobility and Officers of the Army and Navy.



RIGHTON SELTZER WATER. (A "Specialité," as it is prepared from Kastner's Analysis of the Natural Waters), guaranteed to contain all the Salts as in the Natural Seltzer Water, in their requisite proportions.

'he Spring Water of Brighton is so very well adapted to the production of artificial mineral waters, and the fact so well known, that we need only draw the attention of the reader to the fact.

3RIGHTON SODA (Antacid, 5 grains in each bottle). Very palatable.

BRIGHTON LITHIA (very effective as a solvent in Gravel and Gouty eases), usually 4 grains in each bottle. Quantities of six dozen and upwards made to any required strength.

BRIGHTON LITHIA AND POTASS, very useful in Affections of the Liver where both these ingredients are desirable and require to be taken in combination.

BRIGHTON POTASS (Antacid, used for Gravel and Gouty Affections).

BRIGHTON LEMONADE as made by us is acknowledged by all to be perfect in flavour and quality.

AERATED BRIGHTON WATER, a very refreshing drink where the various Salts are not required to be taken, very useful as a vehicle for administering medicines.

BRIGHTON WATER SUPPLY.—The "Times" of October 28th, 1876, remarks:—"The Water of Brighton is of the best possible quality. IT IS ABSOLUTELY FREE FROM ANY KIND OF ORGANIC DEFILEMENT. Drawn from Springs some 400 feet deep, situated on the Brighton Downs to the north of the town, it is never exposed to daylight until it flows out of its pipes in the house of the consumer. There is probably no town in England that has a better water supply than Brighton.'

Bottles are charged 1/6 per dozen; Cases, 1/- per dozen, which is allowed when returned carriage paid to Brighton.

MAGNUMS OF ANY KIND OF WATER IF REQUIRED.

These Waters are well known for their healthful and refreshing properties, being carefully prepared in silvered vessels, with the natural spring water of Brighton—the purest in the kingdom.

FOR PRICES, APPLY TO THE WORKS-

PROVIDENCE PLACE (near St. Bartholomew's Church),

BRIGHTON.

AGENTS WANTED.

WILHELMS

NATURAL MINERAL

SPARKLING.

EFFERVESCING.

INVIGORATING.

"The Beau Ideal of Table Water."-London Figaro.

"The Pearl of Table Waters."-Morning Post.

ABSOLUTELY PURE.

WILHELMS QUELLE.

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"Highly recommended."-NAVAL AND MILITARY GAZETTE.

"Remarkable for its perfect clearness, great purity, and agreeable flavour."—London Figaro.

"Has the recommendation of the very highest names in the medical world."—Illustrated Sporting and Dramatic News.

"Will greatly promote digestion in many cases of chronic dyspepsia."-MORELL MACKENZIE, M.D.

WILHELMS QUELLE.

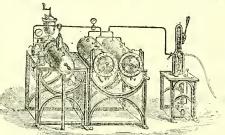
"Develops the bouquet of the more delicate wines, which are deteriorated by admixture with most mineral waters."—John Harley, M.D.

PRICE.—50 large Bottles, 25s.; 100 small Bottles, 40s. Delivered free within four miles radius of Charing Cross. Smaller quantities can be obtained from all Chemists and Grocers. Patent Corks may be had, by which a great saving is obtained. For detailed Price Lists apply to Head Office of the WILHELMS QUELLE,

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3LASS OR EARTHENWARE

GENERATOR, BOTTLING CYLINDERS, AND RACK. DAVENPORT'S NOZZLE AND STOPPER (Horner's Patent) is the only Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices and Royalty lowered. Send for Samples.

Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

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Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

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LONDON, 1862.



LONDON, 1873-74.



PARIS, 1867-78.



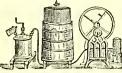
VIENNA, 1873.



PHILADELPHIA, 1876.



CAPE, 1877.



And all accessories connected with the business.

COUNTER FOUNTAINS, HANDSOME MARBLE

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For dispensing Iced Fruit Drinks. MACHINES FROM 30 POUNDS.

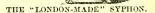
Sole Agents for Codd's Patent Globe-Stoppered Soda Water Bottles.

In use by over 500 established Soda Water Makers in England alone.

SOLE MAKERS OF THE IMPROVED LONDON-MADE SYPHON, 2s. each in quantities.

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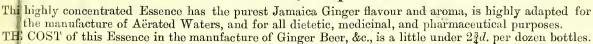
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SOLUBLE ESSENCE

(GUARANTEED PURE AND FREE FROM CAPSICUM.)

Trade Price, 5s. per lb.



Dose 10 or 15 drops to half-a-teaspoonful in water.



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The Essence, which is an addition of Vanilla, Lemon, and other flavours to the above, is strongly recommided for the manufacture of Ginger Beer, Wines, &c., to which it imparts with the GINGER a PLULIARLY FINE FRUITY FLAVOUR and AROMA. THE COST of this Essence in the manufacture of Ginger Becr, &c., is a little under 3d. per dozen bottles.

Directions for the use of this and the preceding Essence.

Fe GINGER BEER, CORDIALS, &c., 8 fluid ounces will be required to make inclusively one gallon of Syrup, or 1 in 20. For WINES, one Pint of Essence will flavour 5 gallons, or 1 in 40.

ESSENCE COMPOUR

Specially adapted for the Manufacture of

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Trade Price, 5s. 6d. per lb.

THS ESSENCE, besides its special adaptation as above, is strongly recommended for the manufacture GINGER BEER and other kinds of Aërated Beverages, especially in those cases where it is desired to part to those drinks at a SMALL COST the FULLEST amount of PUNGENCY with the FINE GINGER AROMA and FRUITY FLAVOURS of the LAST-MENTIONED ESSENCE.

IRECTIONS.—For the manufacture of GINGER ALE, One Pint will be required inclusively for far gallons of Syrup, or five fluid ounces in each gallon. For GINGER BEER or GINGERADE the Pint in five gallons Syrup, or four fluid ounces in each gallon. THE COST of this Essence in the anufacture of GINGER ALE is 13/4d. per dozen bottles, and for GINGER BEER or GINGERADE a little under $1\frac{1}{2}d$. per dozen bottles.

MEDICAL AND OTHER OPINIONS ON THE SOLUBLE ESSENCE:—

"Singularly free from resin."—The Lancet, London, July 13th, 1878.

"It is a pure, elegant preparation, and is free from resinons matter. Ginger Beer made with it is clear and transparent, has the aroma and vour of the Ginger, and is very pleasing to the palate."—Medical Times and Gazette, London, March 16th, 1878.

"It should entirely supersede the officinal preparation of the British Pharmacopæia. The Ginger Beer made with this pure Tincture of Ginger extremely grateful and palatable. It is clear and bright as water; in fact, it will be scarcely recognised under the old name, and is CERTAINLY REFERABLE TO SOME WINES we have tasted under the name of CHAMPAGNE."—Medical Press, London, March 20th, 1878.

"It is a Pharmacoutical Desideratum. Ginger Beer manufactured from this Essence has the purest Jamaica Ginger Aroma, distinguishable as an as poured out. It is a beverage fit for any gentleman's table, and ought to attain great popularity."—The Chemist and Druggist, London, ovember 15th, 1877.

"Contains the Essential Oil or Aromatic constituent of the root, has the Aroma of Ginger without the unpleasant taste of the resin, and is ecially adapted for flavouring Ginger Beer."—Pharmacoutical Journal, London, December, 1877.

"It is really necessary that a superior Ginger Beer should be introduced to the public, and in Mr. Hay's Ginger Essence we find the very ingredient or bring about such a desideratum."—Mineral Water Trade Recorder, London, May 1st, 1878.

PREPARED

W. HAY, Manufacturing Chemist, REGENT'S TERRACE, ANLABY ROAD, HULL.

Mondollot's Patent Soda Water Machinery

Continuous System without Gazometer.

GOLD MEDAL PARIS EXHIBITION

1878.

Full particulars on application to the Sole Agents,

MESSRS. L. FRIQUET & CO.

13 LITTLE JAMES STREET, BEDFORD ROW,

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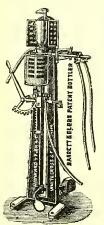
Sole Agents also for BRIET'S GAZOGENES and SYPHONS.

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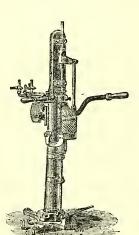
GOLD MEDAL, PARIS, 1878.

BOTTLING MACHINES

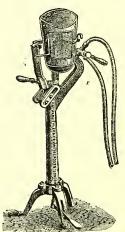
FOR BOTTLING WATERS UNDER EVERY SYSTEM



Barrett & Elers, with Syrup Pump attached.



Bottling Machine, with Syrup Pump attached.

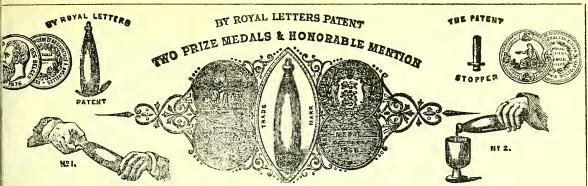


Syphon Filling Machine.



Rack Bottling Machine.

HAYWARD TYLER & CO., LONDON.



te.—With a gentle pressure, as Shown in Diagram No. 1, the Stopper is pushed in, and the position as in No. 2 will empty the contents of the Bottle.

ARRETT & ELERS, 9 DACRE ST., WESTMINSTER.

By Royal Letters Patent

EBONITE STOPPER



Dated June 2, 1874. No. 1923.

STOPPER

CLASS

BOTTLE, &c. AMONT, S The Best, e Cheapest, Cleanest Stoppers before the Trade. o Rubber ings that e out or can taken out the necks. led labour iperseded. eat Saving effected.

Easily Filled,
Easily Opened,
Easily Cleansed
and Washed.
The Stoppers fit
perfectly, and
always fall in
their right
places in the
necks of
the Bottles,
thereby
preventing
leakages.

IMPORTANT NOTICE.

uld the Bottles break, the Stoppers may be newly fitted up and used again in fresh Bottles, thereby being a great saving and advantage over some other Patents.

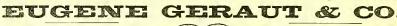
CES FOR EXPORT.—Patent Bottles, fitted with Ebonite Stoppers, for Lemonade, Ginger Beer, and any description of Aërated Waters, 36s. per gross; Patent Bottles, fitted with Glass Stoppers, for ditto, ditto, 33s. per gross; Patent Bottling Machine, with Soda Valve only, £12 15s.; Patent Bottling Machine, with Syrup Pump complete, £17 17s.

These Bottles can be made any shape desired.

Licensees have the advantage of using one or all these Stoppers (except in certain places which applies only to the Wooden Stopper) under one License.

RRETT & ELERS' FILLING MACHINES AND SYRUP PUMP COMBINED

Have been proved to be the Best and Cheapest in the market, of which now upwards of 1,000 have been sold.



For the immediate production of Eau de Vichy, Soda Water, Sparkling Lemonade, Aërated Waters.

First introduced by Eugene Geraut & Co. in 1853.

IMPORTANT NOTICE.

Great Reduction in Price.

1873. Clear or coloured glass, pure ENGLISH BLOCK TIN TOPS, with piston or cap.

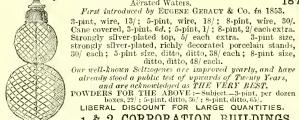
22/6 per dozen, for quantities of not less than one gross.

25/ per dozen, for less than one gross.

Packing in Cask, 5/ per gross.

The Name marked on the metals free of charge for quantities of not less than one gross.

The Name engraved on the glass for quantities of not less than one thousand, 2d. each extra.



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1878.

1 & 2 CORPORATION BUILDINGS, FARRINGDON ROAD, LONDON, E.C.

Manufacturers of SYPHONS, GASOGENES, or

LINCOLNE WI. 3 CO .. Agents.

STREET, GLASGOW, AND 32 LUDGATE HILL, LONDON, DUNDAS

Natural Mineral Waters of "Apollinaris," Hunyadi Janos," Vals Vichy, Carlsbad, Seltzer, Kissingen, Homburg, Pullna, Friedrichshall, &c., direct from the Springs.

Also the ARTIFICIAL MINERAL WATERS prepared by Dr. STRUVE & CO., at the Royal German Spa, Brighton, and R. ELLIS & SON, Ruthin.

Appointed Agents for the celebrated "APOLLINARIS WATER."

W. BEST & SONS, Foreign Wine, Spirit, and Mineral Water Merchants, 22 Henrietta Street, Cavendish Square, London, W.

BOXES MANUFACTURER 0F PATENT BOTTLES, codd's

AND MAKER OF

THE SODA WATER TRADE.

N.B.—Orders executed with dispatch, and on the most reasonable terms.

WORKS:-STEAM

48 and 50 TRINI

TO DRINKS. MAKE

RECIPES AND INSTRUCTIONS FOR WORKING.

A Machine, with Dial and Water Gauges, to make 300 dozen per day £30 0 £40 1,000 ditto ditto £30 0 0 Engine and Boiler to drive same ...

PARTICULARS OF

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tling Machine.



GOLD MEDAL

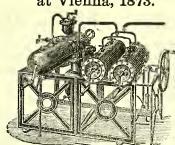
MACHINERY. SODA WATER.

Awarded Grand Medal of Progress at Vienna, 1873.



minimum cost hy using these Machines.

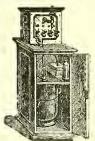
No Steam Power wanted. Entire Saving of Coals. Half the usual Labour. Saves Breakage of Bottles. Simple in Construction.



TRADE MARK Generator and Bottling Cylinders.

Agents for Lamont's Patent Bottles, and Vaass & Littman's Ice Making Machines.

Sole Agents for Galloway's "Excelsior" Soda Water Machine, with Steam Engine comhined, and "Universal" Double Pump Machine, Guaranteed to Make 40,000 Bottles per Day; also all other Specialties made by this celebrated House.



Cabinet Machine.

Cost of Machines Saved in one Season in Broken Bottles alone.

undersigned are the only Manufacturers in Europe of the Improved ines for Making, Bottling, and Drawing on Draught Aerated or

firal Waters.

Tse Machines are lined with pure tin, the pipes are of pure tin, and vecare is taken to make them as perfect as possible. For convenience, and aving of time and labour, these Machines are not excelled; therefor Makers of Soda Water, Lemonade, Ginger Ale, Seltzer, Potass, i., and other Waters, they are invaluable.

Before purchasing send for Catalogue of 104 pages, post free, giving illustrations and prices.

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In our New Catalogue, just issued, will be found illustrations and descriptions of the various Machines for Making Aërated vers and Bottling the same, Marble Machines for the Counter, of various designs and prices, Copper Cylinders and Coolers, on and Fillers, Ice Safes, Silver-plated Counter Draught Tubes, Tumblers, and Silver-plated Holders, Measuring Taps, Ice on Freezers, Fruit Juices, Extracts for flavouring, and Fruit Syrups, for Export or otherwise. Patent Clasps for Bottles, Patent Ganges, the Cabinet Machine for Clubs, Private Families, Masses, &c. Mineral Waters for Export. Bottles, Corks. ure Gauges, the Cabinet Machine for Clubs, Private Families, Messes, &c. Mineral Waters for Export. Bottles, Corks, iler Ale Extract, Gum Extract, for producing foam, Cider Extract, &c., &c.

Lime Juice Cordial and Syrup of the very finest quality.

ISULNID IL IS Y.

BOURTON.

SMALL STEAM ENGINES

(Economical in Fuel and in First Cost).

These small Engines are specially adapted for driving Soda Water Machinery wherever a moderate amount of cheap power is required. They combine simplicity, compactness, and great strength, are easily managed, occupy very little space, and require no fixing.

They are available at any time, as steam can be got up in half an hour from cold water.

They require no fixing, being erected on a Cast-Iron Water Tank Foundation.

They are simple in construction, and, having as few working parts as possible, are not likely to get out of repair.

They can be driven by a boy. Can be made to burn GAS instead of Coal.

Nominal horse power	1	11/2	2	3	4	5	6	8	10
Engine and Boiler combined£ Engine and Boiler on three	39	47	55	70	88	100	115	135	157
Wheels, with Handle£	41	49	57	75	95	110	125	145	167

ALL SIZES IN STOCK-DELIVERED FREE TO ANY STATION. [Illustrated Catalogues with full particulars on application.

SILICATED CARBON FILTERS.

DOMESTIC FILTER, NO. 27.



Made in cream-coloured Stoneware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.

All sizes of this pattern can now be had with Patent Ice Compartment, which renders this Filter the most perfect of Refrigerators.

			201	0		- 1	Vith Ice
			PRI	CE	.5.	Con	partment.
No. 0.	capacity	1	gall.		10s. 6d.		_
No. A.		1	.,		14s. 6d.		17s. 6d.
No. B.		2	"		21s. 0d.	•••	25s. 0d.
No. C.		4	11		32s. 0d.	• •	36s. 0d.
No. D.		6	"		42s. 0d.		48s. 0d.
No. E.		8	11		52s. 0d.	• •	60s. 0d.
No. F.		12	"		70s. 0d.		80s. 0d.
110. 1,	,, .	-	"	•••		•••	

UNIQUE STONEWARE FILTER, NO. 28.

No House should be considered as thoroughly furnished until it is supplied with one or more good Filters.

No Water should be used for Drinking or Cooking without being Filtered.

This Filter is made of a New Ornamental Stoneware, similar in shape to the Domestic Filter, and of two-gallon capacity. When arranged in a Hall or Conservatory, side hy side with evergreens, the effect is very pleasing.

Price, with Silver-plated Tap. 30s.



MAIN SUPPLY FILTER, NO.

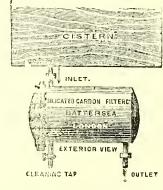
SPECIALLY ADAPTED FOR Mansions, Schools, Hospitals, Public Institutions, Breweries, Distilleries, Soda Water Manufactories, Dye Works,

And all other Establishments where large quantities of

PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows :-A, $\frac{1}{2}$ -inch or $\frac{3}{2}$ -inch pipe £6 6s. £9 9s. B, 1-inch pipe C, 11-inch, 11-inch pipe £15 15s. D, 2-inch pipe



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

Special Contracts entered into for Large Works, Institutions. &c., &c.,

FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.

Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.

FILTERS FOR SHIP'S CABIN USE.



No. 26.

As supplied to the Admiralty, and used on board the first Steam Life-Ship "Peronelle."

Made in hard Stoneware, strongly cased in Wicker, and fitted with Silver-plated Tap.

							٥.	u_*
- 1	-gallon	capacity			••		10	6
1	,,,	,,			• •		15	0
2	,,,	**		• •		• •	22	0
4	11	11			••	• •	36	0
6	11	"					48	0
8	"	"	• •	••			57	6
10	11	"				• •	68	0
		**						
							-	

These Filters are invalnable on board ship, furnishing a supply of pure and wholesome water during a long voyage.

DOUBLE-ACTION NEW

No. 35.

In Cream-coloured Stoneware.

This Filter is specially adapted for rain water, and also for very hard or muddy water. The second medium being protected by a slah, no water can possibly reach it until after passing through the first medium. By this means a double process of fittration is effected, whilst at the same time the impurities contained in the water are deposited on the slah and may be seelly cleaned away with a the slab, and may be easily cleansed away with a sponge.

Prices complete—A, 2 gallons, 30s.;

B, 5 gallons, 50s.

Extra Blocks supplied for these Filters at 10s, 6d. and 15s. each.



REFRIGERATIVE CANVAS FILTERS, No. 32,

For hanging in Verandahs, Tents, or Huts, and also for travelling in hot climates. Prices—A, 21s.; B, 25s. A LIBERAL DISCOUNT TO THE TRADE.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON. PARIS: 131 Boulevard Sebastopol.

NEW YORK: 62 Water Street (H. R. Mensing, Agent).

SILICATED CARBON FILTERS.

PHON FILTERS FOR TRAVELLERS.

y means of these ers pure and pery wholesome water be drunk from any or stream by ibly immersing the Fier therein and drawu the water through htube by suction. ach of these port-

Filters may be

Iring medium.



used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is con-

tinuous. hey are readily cleaned from sedimentary matter by merely lying through the tube, and brushing the surface of the

Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal box Ditto, 32 inches diameter, in best stoneware with silver-plated tap 7 Emigrant's, 5 inches diameter, with silver-plated tap 12 Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and in Zululand, and to the Ashantee

Expedition Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits

TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES. O, 2s. 6d.; A, 4s.; B, 5s. 6d. Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29.

Shape of this Filter as Fig. No. 24. O, 2s. 6d.; A, 4s.; B, 5s. 6d.

 $2 \text{ in., } 1s. 6d.; 2\frac{1}{4} \text{ in., } 2s. 6d.; 2\frac{3}{4} \text{ in., } 3s.; 3\frac{1}{2} \text{ in., } 4s.; 4\frac{3}{4} \text{ in., } 5s. 6d. ea.$ SPECIAL QUOTATIONS FOR QUANTITIES.

PRIZE FILTER,

This Filter is constructed in the form and colour of an Etruscan Vase, having inside it a movable pan, into which the Silicated Carbon filtering medium is fitted.



0

0

PATTERN NO. 23.

The exterior is made of Perous Ware, which acts with remarkable power as a Refrigerator, keeping the water deliciously cool. Capacity, about Two Gallons.

PRICE, WITH SILVER-PLATED TAP, £3 10s.



DINING-ROOM FILTER.

No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

PRICES.

A			••				••	••	••	35s.
В		••		• •	••	••	••	• •		80s.
A,	with	Ice						••	••	424.
				(Ne	wΡε	tent	.)			
В,	with	Ice	Con	par	mer	t				100s.
				(Nev	w Pa	tent	.)			

large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a ccoler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A

COOL DRAUGHT OF PURE WATER.

Price, with Silver-plated Tap Ditto, ditto, with Ice Compartment Capacity, Two Gallons.

Specially adapted for Tropical Climates.



ORTABLE FILTER, No. 34, for Travellers at Hotels, Families at the Seaside, Pic-nics, &c. Made in Marbled Porcelain, with Cover. Can be placed in a jug, decanter, or other vessel. Price 7s. 6d. each.

ILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

OZOKEREK.

PATENTED.

Grand Medal,
MOSCOW, 1872.



Grand Medal, VIENNA, 1873.

MADE IN ALL SIZES.

At the CENTENNIAL PHILADELPHIA EXHIBITION the highest honours were awarded to

J. G. & J. FIFILD

FOR THEIR EXHIBIT OF

GANDLES

PATENTEES & ORIGINAL MANUFACTURERS

SELF-FITTING CANDLES.

Made in all Sizes. | Made in all Colours. | Burn to the End. | Require no Scraping. | Are Safe, Economical, Cleanly.

CANDLES SPECIALLY ADAPTED FOR EXPORTATION TO HOT CLIMATES.

OZOKERIT (Patented). In handsome 1-lb. Packets.

These beautiful Candles are made in ALL sizes, and from their great hardness and non-liability to bend when exposed to a high temperature, are well adapted for Ball Rooms and Tropical Climates. They possess the highest illuminating power of all descriptions of Candles.



UNITED SERVICE SOAP,

Of highly emollient properties, and singular durability of Perfume.



Tablets 5 to 1b.

TRANSPARENT GLYCERINE TABLETS, TRANSPARENT HONEY
TABLETS, BROWN WINDSOR, and all FANCY TOILET SOAPS,

In Tablets, Squares, or Bars, and in all qualities.

EMOLLIENT "STOCKHOLM TAR SOAP,"
Very detergent, and a powerful disinfectant.

NIGHT LIGHTS, WAX MORTARS, DISH-WARMERS, LIGHTING-WICK BOUGIES, WAX and TRANSPARENT TAPERS, &c.

CARRIAGE CANDLES in Wax, CHNOPHYLAL

PATENT CANDLE GUARDS.

These Glasses (made to fit 4's and 6's only) more effectually prevent the Guttering of Candles than any article ever introduced.



OZOKERIT, & Stearine, all sizes.

Specially adapted for Ball-rooms, Churches, &c.

PATENT SAVE-ALLS & CANDLE-CUTTERS for use with these.

Full particulars, with drawing, sent on application.

Wholesale Detailed Price Lists of

J. C. & J. FIELD, PATENT CANDLE WORKS, LAMBETH MARSH, LONDON, S.E.

IMPORTANT NOTICE TO CHEMISTS.

Iwing to the unscrupulous methods and false assertions employed by an irresponsible vendor of India Rubber Porous Plasters, we feel constrained to state that our

INDIA RUBBER POROUS STRENGTHENING PLASTERS

re guaranteed not to contain a single atom of Lead or any other ingredient calcuated to injure the consumer; on the contrary, THEIR COMPOSITION IS PURE VEGETABLE; in quality and general appearance they are unsurpassed by any naker, and can be obtained by the gross at £1 16s., less 10 per cent.

THE "LANCET."

"Messrs, SEABURY & JOHNSON have produced a list of Plasters, all made with India Rubber as a basis, which are elegant, stick well, are exible, easily adapting themselves to the folds of the skin, occasion no inconvenience to the patient, and have the appearance of being made with faith-ulness to the British Pharmacopæia. One Plaster worthy of especial praise is the Salicylated Isinglass: it is flexible, and on being slightly wetted makes a good adhesive plaster for surgical purposes."

THE "MEDICAL PRESS AND CIRCULAR."

"Among more recent and valuable Pharmaceutical improvements we would draw the attention of the reader to an elegant and convenient lot of lasters prepared by SEABURY & JOHNSON. We have recently tried some of them, and find them to be, severally, very neat, clean, and efficacious reparations. India Rubber has been used as a base in the preparation of the Plasters, by which means the medicinal substances used are protected. With regard to their therapeutical efficacy, and the style in which they are got up, we can speak from experience. Among the other Plasters which have fiven us great satisfaction, we may mention those in which Belladonna and the Spanish Fly are, respectively, the chief ingredients."

"LONDON MEDICAL RECORD."

"Messrs. SEABURY & JOHNSON, of 28 Rcd Lion Square, London, have forwarded to us a series of Plasters made in a style which deserves warm praise. All of them are of the best make that we have yet seen, and, taken as a series, constitute a considerable improvement in the manufacture of Medicinal Plasters, of which surgeons and physicians will, on inspection, easily realise the value. Their Salicylated Isinglass Plaster, spread on strong vaterproof cotton cloth, and applied by wetting, is the best surgical adhesive plaster which we have seen. The plaster itself is made of pure gelatine, and santiseptic in character; it adheres firmly and closely on being wetted with a sponge; it does not spoil in any climate. It is obviously from its nanufacture calculated to last much longer than the ordinary adhesive plaster. The Mustard Plaster, the Capsicum Plaster, India Rubber Blister Plaster, and Pitch Plasters are all equally deserving of commendation."

The "British Medical Journal," "Medical Times and Gazette," "Chemist and Druggist," and many of the Provincial Medical Journals have noticed our productions as worthy of special commendation. Our improved Pharmacopæia and Surgical Plasters in India Rubber ombination overcome all objections found in the use of plasters, and present the following advantages and qualities, which will be appreciated by every Physician, Surgeon, and Chemist :-

Perfect Cleanliness and Reasonable Price. Perfect Pliability in any temperature. Adhesion without Heat or Moisture. Combined India Rubber Prevents Decomposition.

Being Porous they do not slide or move, thereby ensuring increased local action. They remain serviceable longer than other plasters.

India Rubber Preserves the incorporated Extract or Drug.

Our Mustard Plasters are spread on Cotton Cloth instead of Paper.

Our Isinglass, Court, Corn, and Bunion Plasters are all spread with Chemically-pure Fish Gelatine incorporated with Salicylic Acid. Fish Isinglass treated by our method of purification ensures an article that adheres quickly by the application of the slightest moisture;

Salicylic Acid. Fish Isinglass treated by our method of purincation ensures an article that adheres quickly by the application of the slightest moisture; in addition to its more susceptible and greater adhesive properties it is rendered antiseptic.

Every Pharmacopoeia Plaster gnaranteed to be of Official Strength. We also manufacture in addition to our list of India Rubber Plasters, in the most approved form and improved quality, Mustard, Silk, Isinglass, Medicinal, Corn, Bunion, and Court Plasters in great variety.

If our India Rubber Porous Strengthening Plasters possess any superiority over similar articles it is owing to an increased local action. All Porous Plasters are packed two dozen in a box, and are fully warranted to give perfect satisfaction. We quote a few of the more prominent kinds, subject to 10 per cent. discount monthly.

		Size	e, 71×5.		Per	doz.	Per	gros	S.	Surgeons' Rubber Adhesive Plaster, 7 in. x 1 yd Per doz. Rolls £0 1	17	0
India	Rubber	Porous	Strengthening Pl	lasters	4	0	£1	16	0	Mustard Plasters (10 in a box), on Cotton Cloth Per doz. 0 1	10	0
	,,	,,	Arnica		4			4		,, ,, (6 in a package) ,,, 0	6	0
	99	99	Aconite		5			17		,, (3 in a package) ,,, 0		
	33	"	Belladonna (B.P.		4			1I		,, ,, yard Rolls, 6 × 36 ,, 0 1		
	99	33			5			17		", $\frac{1}{2}$ -yard Rolls, 6×18 ", 0		
	22	"	Opium (B.P.)		7			16		Salicylated Isinglass Plaster, 5-yard RollsPer Roll 0	5	0
	99	91	Poor Man's		4			4		<u> </u>	1	3
	99	"	Burgundy Pitch					4		India Rubber Porous Strengthening Plasters, in 5 yard Rolls, 5 in.		
	11	. 11	Warming ,,					17		widePer Roll 0	6	3
			nna Plaster (B.P.)					7		Ditto ditto in yard Rolls, ditto ditto Per doz. 0 1	17	0
			Plaster (B.P.), 7	in. x	I ydPer d	loz. Rolls	1	7	6	India Rubber Porous Belladonna Plasters, in 5 yard Rolls 5 in. wide		
India	a Rubbe	r Capsic	um Plaster	"		11	1	7	6	Per Roll 0	8	6

BENSON'S CAPCINE POROUS PLASTER,

The most active external remedy known, is a great improvement on the slow action of the ordinary Porons Strengthening Plaster, and was specially recommended by American Medical Jurors, as an article of genuine merit. Per dozen, 8s. 6d. 10 per cent. discount.

Our goods can be obtained from all Wholesale Druggists, Patent Medicine Dealers, and Druggists' Sundriesmen. Complete Price Currents of our Plasters sent to any address on application. Inquiries and correspondence promptly answered.

SEABURY & JOHNSON, 11 Jewin Crescent, Aldersgate Street, E.C.

ENO'S

"FRUIT

SALT,"

"FRUIT SALINE," OR "FRUIT POWDER."

ENO V. STEPHENS IN THE COURT OF CHANCERY.

Shorthand Writer's Notes of Vice-Chancellor Bacon's Summing-up and Judgment.

Shorthand Writer's Notes of Vice-Chance

Sir Henry Jackson, Q.C., on proceeding to sum up in detail on the
evidence and arguments in the case, was stopped by the VICECHANCELLOR in the following words:

Sir Henry Jackson, I do not think I ought to trouble you. The case has
been discussed at very great length, I confess somewhat to my attendament. When Mr. Hemming decline to adopt the very by the same evidence
the some facts which had been on his own behalf. If that had been, as it
prohably my have been his intention at that time, there would have been
siderable expense, of course to somewhad, the evidence upon which the
Court, but the Court of Appeal and acted upon that evidence. The case,
however, concludes, and no evidence what-ver is adduced by the Defendant
—not even his own steament in his Defence is verified by his own affile
What is to be done with a case like that? The wide dividence of the case,
however, concludes, and no evidence what-ver is adduced by the Defendant
—not even his own steament in his Defence is verified by his own affile case,
however, concludes, and no evidence what-ver is adduced by the Defendant
—and even his own steament in his Defence is verified by his own affile case,
however, concludes, and no evidence what-ver is adduced by the Defendant
when the case of the court of Appeal and acted
was decided upon the first occasion; I melt bought it right to adopt that restriction or ther than the theu present exigency of the
covered that the court of the court of Appeal
shows that there should be any restriction, or that there should be any
restriction when the case came on for hearing. Now it comes on for
hearing upon processly the same evidence, and the evidence, among other
things, is, that in the circular when has companies this bottle of Salt, the
words to which the Plaintiff particularly objects are repeated by the
words to which the Plaintiff particularly objects are repeated by
the words to which the Plaintiff particularly objects are repeated by
the words of the court of the c

enectual of not wound depend upon the consistency of the paste or glue, of perhaps the humidity of the atmosphere or may other accident. That there was no intention to perform his promise, I am satisfied of, and that there has been no performance of his promise I think is clear.

Upon the general case, therefore, I think the Plaintiff is entitled not only to the Injunction in the terms of the Interlocutory Order, but upon those more extensive terms which the Plaintiff asks, by his claim, should he applied to the Defendant's infringement of his rights.

Then there is another subject which is so intimately connected with that that I de-ired to hear them both together, and I am very glad I did, hecause, as Mr. Giffard has just told me, that is the main question in dispute between the parties. For the Injunction the Defendant does not seem to care much, though he has violated it, in my opinion, plainly; but he says the question is whether there is a title to register this Trade Mark for which the Defendant proposes to apply. Now that depends upon the words of the Act of Parliaunent which have been used, the more important of which are "so resembling as to be calculated to deceive." That is a question not to be decided by eyesight; I am invited to lay these two devices side by side, and, since they are not identical and since there are

great differences in their external appearance, to decide that they are not calculated to deceive. To that word DECEIVE I have no right to criticise or quarret with; it is used in the Act of Parliament, and if I were to give one sense to it, it is plainly in my jndgment calculated by the Defendant, meant and intended by him, to deceive any person who is not vigilant enough either in eye or in ear to detect at ouce the difference between Vinous and Eno's, and the difference between Fruit Salt and any other salt, Except the birty religible transpired to the religious property of the pr

Vinous and Eno's, and the difference between Fruit Salt and any other salt, Eno's title being plainly upon his Trade Mark, Eno's Fruit Salt.

It is not, as I have said, by sight; it is not by the use of a microscope; it is hy any other means of detecting more or less of resemblance that you can decide a question which the statute contemplates by using the words that I have referred to. But it is whether the Registrar, whose office it is to register, is satisfied before he performs his function by registering the mark, that the applicant's mark does so resemble as to be calculated to deceive. Can any living man doubt that it is not only calculated—that is intended—but that it is also calculated—that is to say, meant and entrived for the purpose of deceiving—else why does he do it? The world is wide, as has been said in the Judgment referred to, and all things in the animate and inanimate world are open to the Defendant to make a device which for the purpose of deceiving—ties why does need it? The world is wide, as has been said in the Judgment referred to, and all things in the animate and inanimate world are open to the Defendant to make a device which shall distinguish his goods from those of any other person. But the Plaintiff having appropriated to himself, and enjoyed for years a device in which the principal characteristic consists of a hunch of grapes, with a Latin motto, and the specific description which relates to Eno's Fruit Salt, the Defendant proposes to register a design in which the principal device is the stau of a vine with a bunch of grapes and some leaves, and a Latin motto around it, and it is to be called "Vinous Salt." If there was nothing in the case but the contrast of these two things, it might, perhaps, to some persons, who transted only to their eyes, be said there was no resemblance between them, or no sufficient resemblance; but the Registrar is bound to take the whole case into his is not the way that the Consideration; Inc is not to be balled by any in the latest case that was leftore Late is not the way that the Conquestion. The Defendant there had as good a right as a case upon his commodities. Nobody could dispute it, and nobody, putting the two things together, could say they were so much alike as to deceive. Mr. Hemming insisted that the stamping, being made on a hard metal, was likely to be blurred, and the persons to be deceived. I have a very clear recollection of that case, and tay it would be impossible for a man with eyes, or with one eye, in his head to mistake the device in that case for the device which the Plaintiff desired there to us.

and the persons to be deceived. I have a very clear recollection of that case, and asy it would be impossible for a man with eyes, or with one eye, in his head to mistake the device in that case for the device which the Plaintiff desired there to use. Mr. HEMMING:—Your Lordship will pardon me, I was only quotifug the Master of the Rolls.

The VCLE-CHANCELLOR:—I know, and have also clearly in my mind what the Master of the Rolls said and what he did notonly in the "Dog and Porridge Pot" case, but in that case. The Master of the Rolls' judgment takes a wide and comprehensive view of the subject. He refers to the statute only for the purpose of verifying and corroborating that view, but what he said was "an honeet man who wants to mark his goods never thinks of taking the device partly or wholly which some other tradesman is employing for the purpose of marking his goods," and that I take to be the true principle of the case.

And, taking all these things together, the Plaintiff's evidence in the first place, the total absence of evidence or statement on the part of the Defendant, excepting the total absence of evidence or statement on the part of the Defendant, excepting the received in the word "I man a any time except that he admitted to sind one wrong in using the word "I man a tany time except that he admitted to sind one wrong in using the word "I man a tany time except that he admitted to sind one wrong in using the word "I man a tany time except that he admitted to sufficient or the commodities tendered in the shape in which they are sent in the order of the commodities tendered in the shape in which they are sent in the order of the commodities tendered in the shape in which they are sent in the order of the commodities tendered in the shape in which they are sent in the order of the contrary intentiou I cannot come to a contrary intentiou I cannot come to a contrary conclusion than that the injunction ought to go in the terms in which the bill prays for it, extending it therefore beyond the Injunctions g

your Lordship for the costs of taking the evidence.

Mr. HEMMING: —I do not think your Lordship is ever in the habit of giving costs of that kind, unless there is some special reason for taking the notes. I do not know whether my friend anticipates an appeal upon that evidence. I am sure he will not say so, and I do not think the Court is in the habit of allowing the costs of a shorthand note of the evidence under such chremstances. It is not taken by arrangement. It is not in every case where there is an arrangement between the object of the evidence under such chremstances. It is not taken by arrangement is laid own that will not suppose the even when there is an arrangement, it is an arrangement between the object allows these costs. I ask your Lordsy that to say anything about them unless a general rule is laid down that when the rule is the other way.

The VICE-CHANCELLOR:—So far from laying down any rule, my notion of this particular subject of the costs incurred by the shorthand erriter is that it ought not to be done without a good and sufficient reason is to me perfectly apparent and conclusive of the shorthand erriter is that it ought not to be done without a good and sufficient reason is not me perfectly apparent and conclusive of Appeal, as being put in here. Mr. Hemming objected to that subject content of Appeal, as being put in here. Mr. Hemming objected to this subject of the case-ording to the present practice of this Court when the object of the case of the case ording to the present practice of this Court of the own head the necessity for the em comment of a shorthand writer, and having done it without reason as I thought; and having done it without effect as have decided, in my opinion the costs ought to be included in those costs which the Defendant is bound to pay to the Plaintiff.

Mr. HEMMING:—That does not mean any transcript—there has been no transcript taken.

no transcript taken. Sir HENRY JACKSON :- I have the transcript here, and I was prepared

Sir HENRY JACKSON:—I have the tainest points and I was perfect to sum up this morning.

Mr. HEMMING:—There was no occasion for it.

Sir HENRY JACKSON:—I do not want of course the costs of any of the speeches: I merelytake the transcript of the shorthand notes of the evidence.

The VICE-CHANCELLOR:—I think that must be so, hecause for anything I know this day week the Lords Justices will have them in their hands.

Mr. HEMMING:—Then would be time to ask for it.

Sir HENRY JACKSON:—My Lord has decided.



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